WELLHEAD PROTECTION PLAN

for

The Town of Aberdeen,

Moore County, North Carolina

PWS ID #03-63-020

December 4, 2012
Revision 3

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BACKGROUND

In 1986, Safe Drinking Water Act (SDWA) amendments added Section 1428, "State Programs to Establish Wellhead Protection Areas", which requires each state to develop a program to "protect wellhead areas within their jurisdiction from contaminants which may have any adverse affects on the health of persons". The term wellhead protection area (WHPA) is defined in the law as "the surface and subsurface area surrounding a water well or wellfield, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfield". North Carolina's EPA-approved Wellhead Protection Program provides technical support to local governments and public water supply systems in their endeavors to develop and implement their own Wellhead Protection Plans (WHPPs).

North Carolina's objective in developing a protection plan is to provide a process for public water system operators to learn more about their groundwater systems and how to protect them. Wellhead Protection Plans allow communities to take charge of protecting the quality of their drinking water by identifying and carefully managing areas that supply groundwater to their public wells. Implementation of a WHPP in North Carolina is voluntary at the present.

INTRODUCTION

Aberdeen is a small town in Moore County, North Carolina, located in the Sandhills of the Coastal Plain. The area was originally settled by Scottish Highlanders, and was named Blue's Crossing; in 1888 the settlement was renamed Aberdeen. The Town is located about 60 miles southwest of Raleigh, the State capitol, and about 80 miles east of Charlottte. In 2010, Aberdeen had a population of 6,350 people within the corporate limits. The population experiences seasonal increases because of the attraction of world-class golfing facilities and other amenities in the area. The local economy is based on agriculture, industry, tourism, and retirement.

Aberdeen is located entirely in the Sandhills. The 1985 Geologic Map of North Carolina shows that the near surface sediments consist of the Middendorf and Pinehurst Formations, which are typified by medium to coarse sands laced with intermittent clay lenses and pods. The dominant feature of the Sandhills is a deep layer of unconsolidated to poorly consolidated surficial sand that underlies the upland areas. The terrain is characterized by rolling hills with flat crests, and altitudes generally ranging from 450 to 550 feet. Local relief up to 200 feet is common. Aberdeen Creek, the major drainage feature in the vicinity of the wells, flows generally south through the Town.

The water distribution system has approximately 3,500 connections that supply a customer base of more than 5,600 persons. Aberdeen has interconnections with Southern Pines and Moore County (Pinehurst system), and the Town sells these systems water. The system has approximately 29 miles of distribution line. The average daily

water use for the Town in 2010 was approximately 1.2 million gallons per day with peak demand in late summer or early fall.

The Town uses 17 water supply wells screened in the Sandhills aquifer, which are inspected daily. The pumping cycle for the wells is less than twelve hours per well per day and the wells have an average yield of about 175 gallons per minute and an average depth of almost 200 feet. The system uses four elevated storage tanks with a finished water storage capacity of 1.6 million gallons to provide pressure and storage for the distribution system. Chlorine is injected at the wellheads. Well construction records (see appendix) provided the data listed in Table 1.

The Town of Aberdeen is a historic southern railroad town that is proud to serve its citizens with pure, good-tasting water. Aberdeen has a comprehensive website that provides information on water conservation, hydrant flushing notices, wellhead protection, water fees, and backflow prevention. The Town also has a recycling program and collects recyclable materials once every two weeks curbside.

I. THE PLANNING TEAM

A planning team was formed to develop a Wellhead Protection Plan for the Town of Aberdeen. The Wellhead Protection Committee (WPC) consists of:

- Rickie Monroe, Public Works Director
- Harold Watts, Assistant Public Works Director
- James Robert Matthews, Water & Sewer Superintendent
- Cheryl Ross, Administrative Assistant
- Kathy Liles, Planning Director, and
- Keith Starner, North Carolina Rural Water Association.

The Public Works Director and Planning Director are responsible for implementing the plan. They have accepted the recommendations made in the plan by the WPC. The Town of Aberdeen will begin implementation of the program immediately following approval by the Public Water Supply Section of NCDENR and will complete implementation within ninety (90) days.

Upon completion of the implementation phase of the Wellhead Protection (WHP) Plan, the Administrative Assistant will submit notification to the Public Water Supply Section in accordance with the schedule set forth in the approved WHP Plan.

II. DELINEATING THE WELLHEAD PROTECTION AREAS

Aberdeen's wells are screened in the Sandhills aquifer. A modified calculated fixed radius method was used delineate the wellhead protection areas around the wells. The calculated fixed radius technique uses the pumping rate of the wells and the

estimated recharge to the aquifer to find the size of the area around the wells that needs to be protected. The size of protection area was doubled, because the sands of the aquifer are highly transmissive, and could allow rapid transport of contaminants.

To protect Aberdeen's 17 water supply wells, the area of land surface that contributes recharge from precipitation to the aquifer was estimated. To delineate this area, the aquifer's rate of recharge was estimated using a map available from the Public Water Supply Section. Recharge to the aquifer is high in the Sandhills and is estimated to be 600,000 gallons per day per square mile. The maximum daily pumping rate of the wells over a 12-hour cycle was also used to determine size of the protection area. A twelve-hour pumping cycle is used because State regulations require that the yield of a public water supply well provide the average daily demand in twelve hours.

To delineate the wellhead protection areas, circular areas were set up around each well. Circular wellhead protection areas were used because no directional trends in hydraulic transmissivity could be measured. Several wells had intersecting areas, and these were combined to form well clusters. Scalloped areas between intersecting protection areas were eliminated by constructing a line segment tangent to the outer circumference of the wellhead areas. The size of the area to be protected was doubled, which resulted in slightly longer wellhead protection radii. Doubling the size of the area compensates for the highly porous and permeable nature of the aquifer material. The delineation resulted in three wells with separate, circular wellhead protection areas and two irregularly-shaped well clusters that resulted from intersecting protection areas.

Techniques outlined in The *North Carolina Wellhead Protection Guidebook*, were used to determine the size and shape of the wellhead protection area. The size of the protected area was calculated using the maximum daily combined yield (Q_{mpw}, in gallons per day) for each well, based on a 12-hour pumping cycle, divided by the recharge rate (W, in gallons per day per square mile) , to find the area (A_{cmax}, in square miles). The area was found using the formula below:

$$A_{cmax} = Q_{mpw} / W$$

Where:

A_{cmax} = the protected area in square miles,

Q_{mpw} = maximum permitted daily withdrawal; gallons per day (over a 12 hour pumping period),

W = recharge rate.

To determine the radii of the individual wellhead protection areas, the following formula was used:

$$r = \sqrt{\frac{A_{cmax}}{\pi}}$$

Where;

r = radius of the wellhead protection area (miles)
π = 3.1416…

No trends in directional transmissivity or hydraulic boundaries were evident from a study of the topographic map, and the sands of the aquifer should provide an isotropic medium for groundwater flow. Table 2 lists the wellhead protection radii for the individual wells, and the wells in wellhead protection area clusters. The maps show the wells, the five distinct wellhead protection areas, and potential sources of contamination.

III. INVENTORY OF POTENTIAL CONTAMINANT SOURCES

Potential contamination sources in the wellhead protection area were researched as listed below:

- A database, file, and literature search of all appropriate Federal, State, and local databases was conducted.
- Local records on file at the Moore County Courthouse were researched, and the fire department and county emergency services were contacted to identify past spills, leaks, or other potential sources.
- Records on file at the Fayetteville Regional Office of NCDENR were reviewed.
- Topographic and geologic maps and aerial photos were studied to identify land-use activities, drainage patterns, surface water bodies, and potential contaminant sources no longer in use.
- Windshield and walk-through surveys were conducted to obtain or verify contaminant and owner information.

The Public Water Supply Section's Source Water Protection interactive map viewer revealed many potential sources of contamination within the WHPAs. The EPA's map viewer, Enviromapper, added additional new information. Maps of these databases are included in the appendix. A windshield survey, consisting of driving through all the roads in the area was also conducted to identify any potential sources of contamination and to verify the location of sites found during internet research.

A large number of sites were identified using the Enviromapper and SWAP websites. Several of the sites, both inside and outside the wellhead protection areas, had multiple names. To assist in organizing the large number of potential contaminant sources, Table 3 presents nearby sites located outside the wellhead protection areas.

Records of the local fire department and county emergency management division were searched for any past incidents, spills, or potential contaminant sources within the wellhead protection areas. Records on file at the Moore County Courthouse provided information on land ownership.

Files at the Fayetteville Regional Office of NCDENR were researched for leaking Underground Storage Tank (UST) incidents, groundwater pollution incidents, well

abandonment records, injection well permits, and federally registered UST's. Waste handling facilities, landfills, and hazardous waste site records on file with the Solid and Hazardous Waste Section were reviewed. The Division of Water Quality records were also researched for NPDES Permits and Animal Waste Operations on file.

A map reconnaissance identified land use activities and other terrain features on 1:24,000 scale, 7.5-minute topographic maps and aerial photos. The results of the map recon were verified and updated during the windshield survey. Determining land use activities helps to formulate management strategies, and assists in identifying the types of potential contaminant sources that can be expected in the protection area. Land use area determination was based on visual percent estimates.

Approximately 60% of the land area in the WHPAs is forested, 10% is low-density residential, and 30% is under agriculture. The area is a combination of rural residential development with an occasional business.

Based on land use and the inventory of potential sources of contamination, educational efforts should be directed primarily toward residents, and toward educating small businesses on best management practices. Residential land use areas will be targeted for education on water conservation, and disposal of household hazardous waste and small businesses will be provided information specific to the type potential source.

Risk Analysis

The water supply wells for the Town are constructed in the Sandhills aquifer. The aquifer is composed of medium to coarse sand, which easily transmits water and the aquifer may be semi-confined in places. This porous aquifer is more susceptible to surface contamination from leaks or spills than the confined aquifers of the coastal plain. Additionally, radium isotope (^{226} Ra and ^{228} Ra) concentrations have been problematic in the Sandhills aquifer due chiefly to radioactive decay of uranium-bearing minerals.

High-yielding wells in the Sandhills are sited on ridgelines and hilltops to increase well production. Hilltops and ridges are also the most desirable locations for residences and businesses. Unless planned for, system expansion could be hampered by demographic growth and the location of anthropogenic activities on this desirable land.

The Public Water Supply Section's Source Water Assessment Program (SWAP) Report for Aberdeen found Well 12 to be most at risk. The SWAP Report lists the inherent vulnerability ratings as "higher", the contaminant rating as "lower", and the susceptibility ratings as "moderate" for all the wells, except Well 12. W12 had a "higher" inherent vulnerability rating, a "moderate" contaminant rating, and a "higher" susceptibility rating. The inherent vulnerability rating examines and rates aquifer or well characteristics or conditions. The contaminant rating is based on the number and location of potential contaminant sources within a wellhead protection area. The susceptibility rating indicates the potential to be contaminated by the identified potential contaminant

sources. The SWAP Report for Aberdeen can be viewed at the Public Water Supply Section website, where detailed explanations of the ratings are available.

For each WHPA, the potential contamination sources were ranked according to the threat each presented to the water supply well or wells. The following method was used to rank each potential source in each WHPA:

Each potential source was assigned a risk category of higher, moderate, or lower based on information adapted from the EPA (1993), and from the Oregon Wellhead Protection Program. Each potential contamination source was assigned a numerical "category" score to correspond with the risk category (e.g., higher-3, moderate-2, and lower-1). Each site of potential contamination was then assigned a "proximity" score calculated with the following equation:

Proximity score = 1 – (distance in feet from the well/radius of the WHPA)

The final potential contaminant source (PCS) ranking was obtained by multiplying the category score by the proximity score for each potential contaminant site. This resulted in a relative ranking of each PCS within a given WHPA based on the threat posed to the water supply well or wells. This risk analysis provided information that was used to determine which water supply wells are at greater risk of contamination and which PCS should be considered first with regard to wellhead protection.

The risk analysis shown in Table 5 lists the potential sources of contamination for each protection area ranked according to the threat each PCS poses to the wells. Well W12 is most at risk, with six nearby potential contaminant sources, two of which have a high final risk score. Well W02 is next most at risk with four potential sources nearby, followed by wells W05, W08, and W10 with two potential contaminant sources each.

IV. MANAGING THE WELLHEAD PROTECTION AREAS

The Town of Aberdeen chose a non-regulatory approach to protecting the wellhead areas using public education. The Public Works Director has primary responsibility for implementing the public education program; the alternate responsibility lies with the Planning Director. The Wellhead Protection Committed may be consulted as required.

A Wellhead Protection Brochure (tri-fold) will be made available to each resident, business, and industry within the Wellhead Protection Areas. Copies of this brochure will be made available at the Aberdeen Town Hall. In general, the brochure will convey to each citizen/business the following information:

- An explanation of what groundwater is and the number of wells in their particular system,
- An explanation of what a Wellhead Protection Program is,

- Sources of groundwater pollution,
- Tips on protecting the water supply,
- Proper disposal of household hazardous waste,
- Information on proper disposal of household hazardous waste and oils,
- Information on the proper use of fertilizers, herbicides, and pesticides,
- Information on household waste collection opportunities, and
- Information on proper maintenance of heating oil tanks and septic systems.

Aberdeen will provide information to each business, industry, and farm located within the WHPAs on waste handling practices, best management practices, standard operating procedures, and waste oil disposal methods which could be employed to reduce the potential for groundwater contamination. The Town will also provide information regarding the North Carolina Division of Environmental Assistance and Outreach (DEAO) to each business, industry, and farm located within the WHPAs. Owners/operators of potential contamination sources will be encouraged to contact DEAO.

Personnel at Town owned and/or operated facilities will be educated on Wellhead Protection and steps they can take to reduce the potential for contamination (e.g., information about best management practices, standard operating procedures, waste handling practices, etc.). Aberdeen will also contact DEAO to investigate steps that the town can take to reduce the amount of waste released into the air and water and on the land at Town owned and/or managed facilities.

DEAO provides free technical and other non-regulatory assistance to reduce the amount of waste released into the air and water and on the land. DEAO serves as a central repository for waste reduction and pollution prevention information. DEAO emphasizes waste reduction through pollution prevention, encourages companies and government agencies to go beyond compliance, and provides information about the environmental permitting process. This information is provided at no charge to North Carolina businesses, industries, government agencies, and the general public upon request. For additional information, DEAO may be contacted at (919) 707-8100 or (877) 623-6748. For environmental emergencies, the agency can be contacted at (800) 858-0368.

The Town of Aberdeen will contact all facilities or agricultural operations within the WHPAs that store pesticides, or that are otherwise involved with the application of pesticides, to ensure that they licensed by the State of North Carolina and that proper records are maintained to ensure observance of NC Pesticide Laws. Aberdeen will provide information to these facilities or agricultural operations regarding waste handling practices, best management practices, standard operating procedures, and proper waste disposal methods which could be employed to reduce the potential for groundwater contamination. These facilities will also be provided with information regarding the North Carolina Division of Environmental Assistance and Outreach.

All farms, residents, businesses, and industries in the WHPAs with septic tanks will be distributed a copy of the Wellhead Protection Brochure tri-fold and any other information the town can obtain from federal, county and/or state agencies on proper septic tank maintenance.

In the event of a spill along roads or railroads entering the wellhead protection area, Moore County Emergency Management will be contacted at the following number:

Moore County Emergency Management Division: (910) 947-6317

Owners of improperly constructed or abandoned wells identified within the WHPAs will be provided information regarding the threat posed to the water supply by these wells. Owners of improperly constructed or abandoned wells will be encouraged to have these wells properly abandoned in accordance with state well construction standards found in 15A NCAC 2C, "Criteria and Standards Applicable to Water Supply and Certain Other Wells". If information exists that a well is improperly constructed or is contributing to the contamination of groundwater, the Town of Aberdeen will notify the Aquifer Protection Section of the Division of Water Quality.

All owners/operators of regulated USTs and other facilities subject to federal and/or state regulations located within the WHPAs will be requested to supply documentation that their facility is in compliance with regulations. Operators of USTs will be asked to supply the Town with a copy of their UST permit. If any UST sites are found to be non-compliant, the Underground Storage Tank Section of the State Division of Waste Management will be notified.

If an abandoned UST site is found, Aberdeen will contact the North Carolina Division of Waste Management, UST Section, to determine if a closure report was submitted demonstrating that no soil or groundwater contamination was identified during closure. If a closure report was not submitted, the Town of Aberdeen will notify the UST Section of the location of the facility within the WHPAs and its proximity to a public water supply well.

For soil or groundwater contamination incidents within the WHPAs, the Town of Aberdeen will contact the State agencies with oversight responsibilities for remediation to determine if remediation efforts are proceeding in a timely fashion and in accordance with any schedules established by these agencies. Through this process, the Town will bring to the attention of the State agencies with oversight responsibilities for remediation any failures by the responsible parties to comply with required monitoring and corrective action. The Town will also notify the State agencies with oversight responsibilities for remediation, of the location of the facility within the WHPAs and its proximity to a public water supply well. The Town of Aberdeen will also contact the State agencies with oversight responsibilities for the contamination incidents and notify them of the locations of any sites issued notices of "No Further Action" occurring within the WHPAs and will request a review of this assessment.

The Town of Aberdeen will notify any individual, industry, business, or government agency installing or planning to install a regulated UST within the Town's wellhead protection areas of the following regulation: North Carolina Underground Storage Tank Regulation 15A NCAC 2N .0301 stipulates specific siting and secondary containment requirements for UST systems installed after January 1, 1991. The rule is summarized as follows:

- No UST system may be installed within 100 feet of a public water supply well or within 50 feet of any other well used for human consumption.
- Secondary containment is required for UST systems within 500 feet of a well serving a public water supply or within 100 feet of any other well used for human consumption.

Violations of this regulation will be reported to the Division of Waste Management, Underground Storage Tank Section. The UST Section will also be notified of the location of the facility within the WHPAs and its proximity to a public water supply well or any other well used for human consumption.

A regulated UST system is any underground storage tank and associated piping that contains petroleum (including gasoline, diesel and used oil) or a hazardous substance as defined by the State rules (15A NCAC 2N). Tanks containing heating oil for use on the premises where stored are not regulated.

Owners of petroleum aboveground storage tanks (AST's) with a volume greater than 660-gallons or a combination of AST's with a aggregate volume greater than 1,320-gallons are subject to the Oil Pollution Prevention regulations contained in Federal Regulations found in 40 CFR 112. In most cases, these facilities must prepare and implement a Spill Prevention Control and Countermeasures (SPCC) Plan. The Town of Aberdeen will request a copy of the spill plan for each AST located within the WHPAs. Facilities with subject ASTs found not to be in compliance with this regulation will be notified of their regulatory responsibility under this regulation.

The Town of Aberdeen will contact the Division of Water Quality regarding facilities permitted to discharge wastewater to the land surface (Non-NPDES Permitted Facilities) to ensure that any such operations located within the WHPAs are in compliance with applicable regulatory and permit requirements pertaining to environmental protection, such as routine monitoring and reporting requirements.

The Moore County Solid Waste Department operates a landfill and seven staffed containers sites throughout the County, which have recycling containers for aluminum, cardboard, plastic, glass and used appliances. Used oil, lead acid batteries, and tires are collected at the Carthage site.

The NC Cooperative Extension Service works with the Moore County Solid Waste Department to provide pesticide recycling for local farmers. The Pesticide Disposal Assistance Program takes in unused pesticides and pesticide containers for

disposal. The program has funds to operate the program at least once in each county of the state every other year. The Extension Service provides notice of the service in the local paper, and residents are instructed where to drop off their waste and how it should be labeled and stored.

V. EMERGENCY CONTINGENCY PLAN

The Public Works Director is the primary individual responsible for implementing the contingency plan. The WPC may be involved in decision-making in the event that response actions are required.

Short Term (less than 48 hours) Contingency

For major oil or chemical spills within the Wellhead Protection Area, notify the E-911 Communications and Moore County Emergency Management Agency first:

911

Moore County Emergency Management Division: (910) 947-6317

If evidence exists that a well is contaminated, it will immediately be taken off-line and not returned to service until it is determined that water quality from the impacted well is in compliance with standards governing public water supplies. If one of the wells becomes contaminated, it will be isolated from the rest of the system by the Public Works Director or his representative, by closing the valve at the wellhead. A water system schematic is kept on file at Public Works.

Additional phone numbers for logistical, financial, media contacts, and technical resources are listed in Table 6.

Long-Term (greater than 48 hours) Contingency

In addition to contamination, long-term disruptions (greater than 48 hours) in service could result from:

- Long-term power outages,
- Pump failure,
- Decreased well yield, or
- Other system failures.

If it is determined that contaminants entered the distribution system, residents shall be notified not to drink the water until further notice, by using local public information channel 99, on the Town's website, and by using media contacts listed in Table 6 to rapidly inform water users supplied by the Town of Aberdeen of any notices. The following notice appears on the Town's website:

"Special Notice About Your Water

Due to new state regulations: If you lose water pressure due to a malfunction in the Town's water system due to a water leak or a failure of our telemetry system, you will be required to start immediately boiling your water until we receive a water sample back with acceptable results.

The number of customers without water may be too high for each individual to be notified. However, the advisory will be posted on the Town website and Channel 99 when in effect. Depending on the time and day of week the advisory takes place, it may take 24 to 48 hours for test results. If the test results come back not acceptable, it may take an additional 24 hours for results. After this time frame you may check the Town website, Channel 99, or call 910-944-7799 or 910-944-7012 to see if the Boil Your Water Advisory has been lifted."

High-risk water users, such as dialysis patients, schools, hospitals, day care centers, and rest homes will be notified by telephone. If required, a notice will be placed in the local papers.

If contamination occurs, the regional office of the Public Water Supply Section shall be notified immediately of the situation and asked for assistance. Sampling (i.e. bacteriological, VOCs, SOCs, etc.) will begin to determine the contaminant involved and the extent of contamination. A systematic flushing of the distribution system will begin with follow-up sampling conducted as needed until the system is determined to be free of contamination and in compliance with standards governing public water supplies. After consultation with the Public Water Supply Section, residents will be notified that the Town of Aberdeen water is once again safe for consumption.

Ice storms, hurricanes, and floods can potentially disrupt water service. The elevated storage tanks will be filled before any major weather events that could disrupt service. Town personnel will place a priority on restoring well operation once an outage is identified.

Table 6 identifies available logistical, technical, and financial resources. Pump failure or decreased yield in one well can be resolved until it is repaired or rehabilitated, by pumping from the unaffected well.

NEW PUBLIC WATER SUPPLY WELLS

The Town of Aberdeen will amend its Wellhead Protection Plan to include any new wells added to its water system. The following steps will be taken to address any new wells added to the water system:

1. Develop a preliminary WHPA for the proposed well to determine the area of vulnerability.

2. Develop a contaminant source inventory for the preliminary WHPA.
3. Information obtained in items 1 and 2 above will be submitted to the Wellhead Protection Committee (WPC). Any information required by the Public Water Supply Section (PWSS) relating to the development and construction of new public water supply (PWS) wells must also be submitted.
4. If the WPC grants provisional approval of the proposed Wellhead Protection Plan, and the PWSS grants approval to construct or expand the PWS well or well system, then work may proceed with well construction.
5. Finalize the WHPA delineation for the new well.
6. Finalize the contaminant source inventory for the WHPA.
7. Submit finalized WHPA and contaminant source inventory to the WPC.
8. Once approval is received, implement any necessary regulatory and or non-regulatory potential source management practices.
9. Submit the amended WHP Plan and all necessary supporting information to the Public Water Supply Section for review and approval.

PUBLIC PARTICIPATION

After the plan is approved a tri-fold brochure showing the Wellhead Protection Area, including the information listed in Section III, will be mailed to all residents living in the WHPAS.

The Draft Wellhead Protection Plan was made available for a thirty-day period for review and comment after publishing a notice in the local paper. No comments were received. However, the plan will be kept available for public review at the Town Hall. Any substantive comments received from the public will be incorporated into the plan, after review by the WPC.

The Town of Aberdeen will incorporate public participation into the Wellhead Protection Plan by:

- Using public education as a method of managing the WHPAs.
- Informing local business owners and industry of best management practices and providing information on groundwater protection.
- Keeping this plan at the Town Hall for public review at any time.

WELLHEAD PROTECTION PROGRAM REVIEW

The Town of Aberdeen is aware that an effective local Wellhead Protection (WHP) Program is an ongoing process requiring monitoring of the Wellhead Protection Area, and periodic review and updating of an approved WHP Plan. Therefore, the Town's WHP Committee will monitor the WHPAs for any new or previously unidentified potential contaminant sources (PCSs) and activities occurring within the approved WHPAs. The Town will amend the PCS inventory and other Plan components

(e.g. the management strategies, emergency contingency plan, etc.) as necessary to incorporate any new threats to the Town's groundwater source of drinking water. Additionally, the PCS inventory will be updated annually using the same procedures used to develop the original PCS inventory. The Town will also fully update the WHP Plan every five years or at any time a new well is constructed for use with the Town's water supply system or a major land use change occur within the WHPAs. The individual responsible for implementation of the WHP Plan will submit notification to the Public Water Supply Section annually upon completion of the PCS inventory update or immediately following the completion of a major revision. Any amended or revised sections of the approved WHP Plan resulting from an update or revision will also be submitted upon completion.

Additional reviews will be conducted for new construction or development projects, such as new wells or well fields, shopping centers, industrial parks or subdivisions to determine whether any substantial changes to the plan are required.

The town will maintain a GIS layer of all wellhead protection areas. New and changing businesses will be evaluated for addition to the layer. As new WHPA's are added, GIS will be used to identify contaminant sources within the area. The Town Land Development Plan will be amended such that new contaminant sources in the wellhead protection areas shall be considered during the rezoning process.

Appendix to Aberdeen Wellhead Protection Plan

Website and database searches conducted
SWAP and Enviromapper interactive mapping database results
Inventory of Potential Contaminant Sources
Oregon Wellhead Protection Program and EPA(1993) risk categories
Well construction records

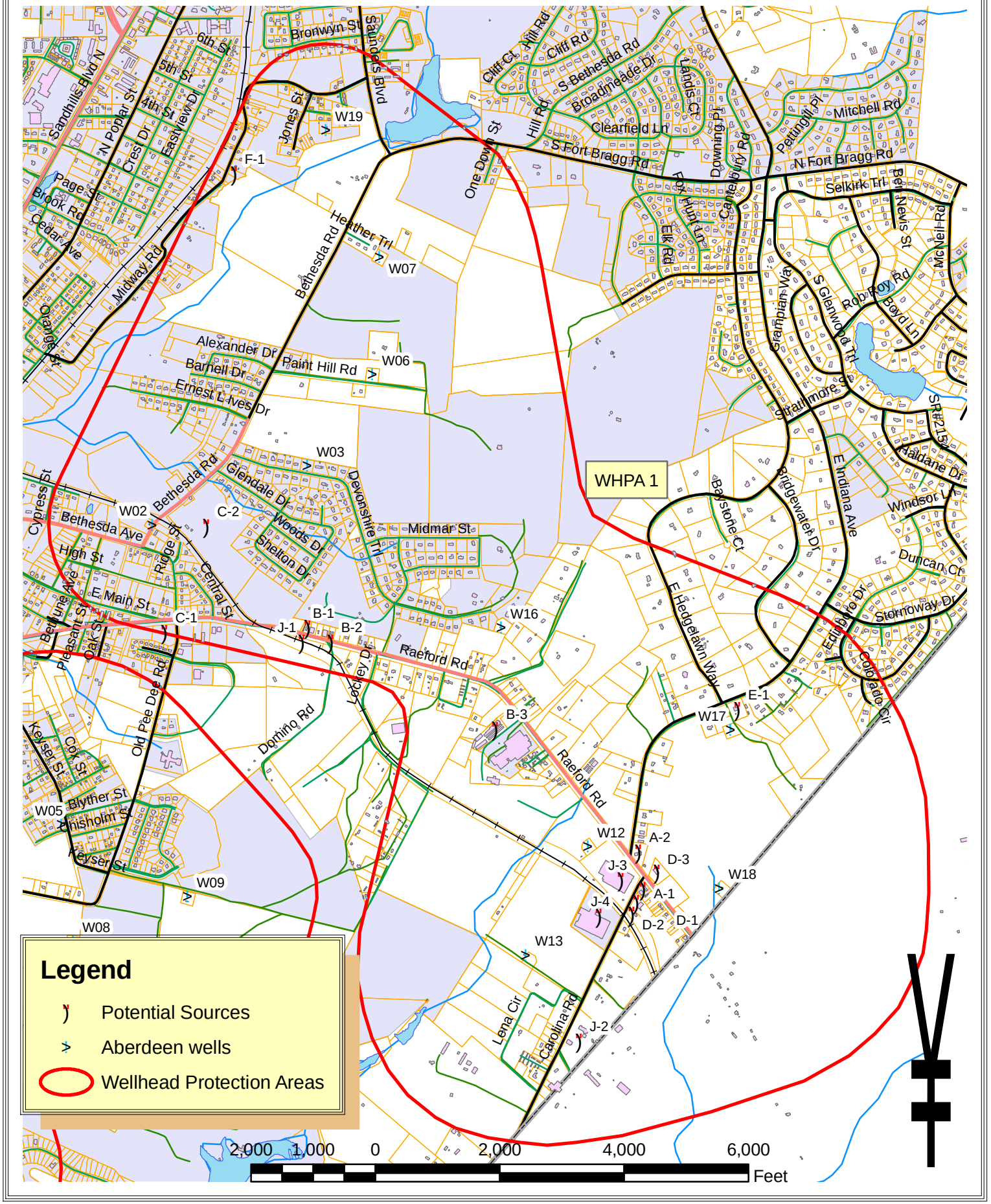
WEBSITE AND DATABASE SEARCH:

1. 2002 Water Supply System Report: http://www.ncwater.org/Water_Supply_Planning/Local_Water_Supply_Plan/search.php

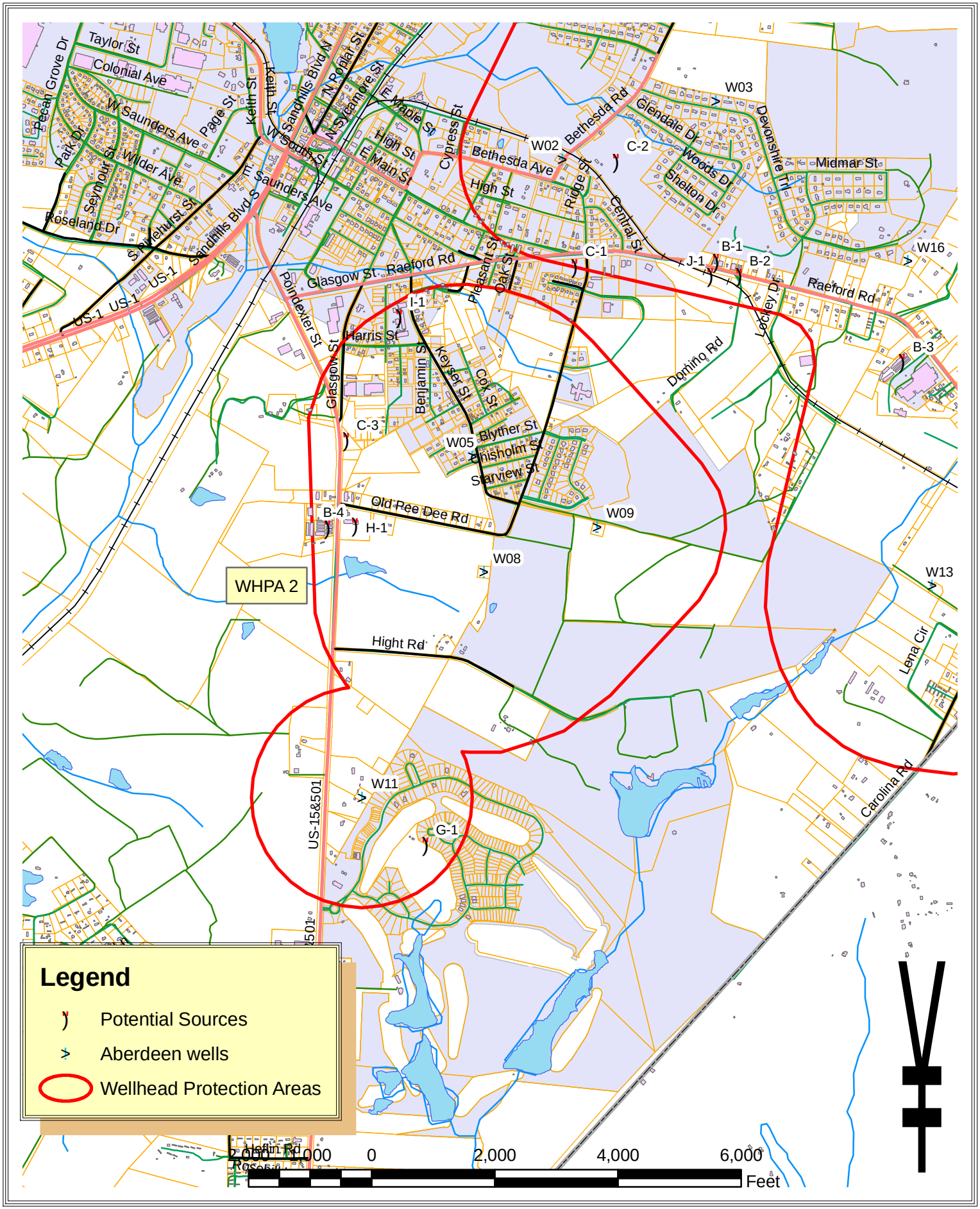
2. EPA's Envirofacts data warehouse (including Enviromapper) for information on air, community water sources, water dischargers, toxic releases, hazardous waste and superfund sites: http://www.epa.gov/enviro/index.html

3. Sourcewater Protection and Assessment in NC for information on Animal Operations, CERCLIS, NPL, NPDES, PCS, RCRA, septage disposal, soil remediation, and Tier II sites, non-discharge permits, landfills, pollution incidents, and UIC and UST permits: http://204.211.89.20/Swap/

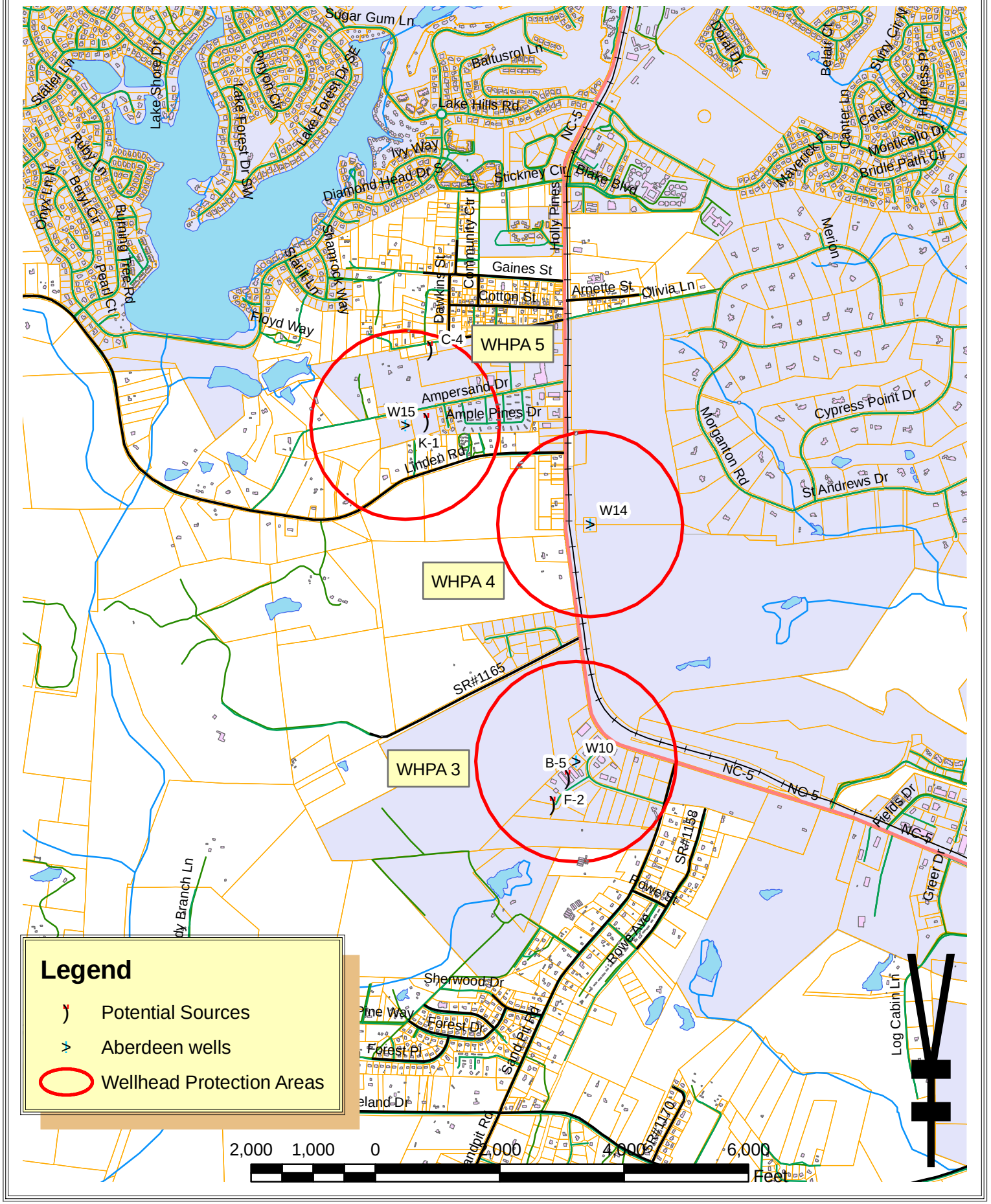
Aberdeen wellhead protection areas



Aberdeen wellhead protection areas



Aberdeen wellhead protection areas



Well	Yield gpm	Depth	Screen Top	Screen Bottom	Casing Dia.
2	130	192'	94'	143'	8"
3	275	147'	96'	143'	8"
5	222	200'	70'	159'	10"
6	162	200'	96'	188'	10"
7	200	230'	80'	120'	10"
8	250	200'	100'	145'	10"
9	100	200'	100'	175'	10"
10	122	200'	100'	145'	10"
11	151	200'	126'	190'	10"
12	260	191'	129'	179'	10"
13	210	188'	126'	176'	10"
14	104	187'	130'	180'	10"
15	108	200'	100'	145'	10"
16	175	270'	210'	260'	10"
17	250	260'	195'	250'	8"
18	225	216'	160'	205'	8"
19	90	92'	67'	82'	10"

Table 1. Aberdeen well construction data

Well	Q, Yield gal/min	W, Recharge gal/day/mi2	Q_{mpw} gal/day	A_{cmax} X 2 Area (mi2)	Radius (feet)
2	130	600,000	93,600	0.312	1,664
3	275	600,000	198,000	0.660	2,420
5	222	600,000	159,840	0.533	2,174
6	162	600,000	116,640	0.389	1,857
7	200	600,000	144,000	0.480	2,064
8	250	600,000	180,000	0.600	2,307
9	100	600,000	72,000	0.240	1,459
10	122	600,000	87,840	0.293	1,612
11	151	600,000	108,720	0.362	1,793
12	260	600,000	187,200	0.624	2,353
13	210	600,000	151,200	0.504	2,115
14	104	600,000	74,880	0.250	1,488
15	108	600,000	77,760	0.259	1,517
16	175	600,000	126,000	0.420	1,931
17	250	600,000	180,000	0.600	2,307
18	225	600,000	162,000	0.540	2,189
19	90	600,000	64,800	0.216	1,384

Table 2. Aberdeen wellhead protection radii

Data Source	PCS Name
SWAP	Lee Paving Company (NCDOT Site 21)
SWAP	Crown Castle
SWAP	Moore County Solid Waste Facility
SWAP	Moore County Landfill #1
SWAP	RMC Mid-Atlantic Aberdeen
SWAP	Pinnacle Furnishings
SWAP	Aberdeen Municipal Supply (Lindane)
Enviromapper	Gulistan Carpet Inc.
Enviromapper	ST Wooten Corp.
Enviromapper	WC Richards Co.
Enviromapper	Thermal Metal Treating
Enviromapper	Syngenta Crop Protection (Rt 211 Aberdeen Pesticides)
SWAP, Enviromapper	ST Wooten (Aberdeen Asphalt Plant)
SWAP, Enviromapper	Minuteman Powerboss Incorporated
SWAP, Enviromapper	Former Powder Metals Prod (Aberdeen contam. GW)

Table 3. Potential Sources ***outside*** the wellhead protection areas

Map Symbol	Type Source	PCS Name
A-1	Gas Station	Alco #27
A-2	Gas Station	Pure 211 Fast Mart
B-1	Mini Storage	Dana Properties Mini-Stor
B-2	Mini Storage	American Mini Storage
B-3	Mini Storage	My Storage Space
B-4	Mini Storage	U-Stor-It
B-5	Mini Storage	Sandy Mine Self Storage
C-1	Cemetery	Faith Cemetery
C-2	Cemetery	Bethesda Cemetery Association, Inc
C-3	Cemetery	St. Joseph AME Cemetery
C-4	Cemetery	Jackson Hamlet Cemetery
D-1	Auto Repair	Ron's Auto Body
D-2	Auto Repair	Johnson's Radiator Repair
D-3	Auto Repair	Crestline Fire Department
E-1	AST	American Tower cell
F-1	Lift Station	Lift Station 8
F-2	Lift Station	Lift Station
G-1	Golf Course	Legacy Lakes Golf Course
H-1	Chemical Storage	Burney True Value Hardware
I-1	UST	Aberdeen Primary School
J-1	Industry	Giegy Chemcial Corp
J-2	Industry	Southern States Galvanizing (NC Landscaping)
J-3	Industry	Kolcraft (Aberdeen Bins)
J-4	Industry	Erico (CGC Investments, Carolina Galvanizing Corp)
K-1	MHP	Ample Pines MHP

Table 4. Aberdeen potential sources of contamination

Closest Well	Map Symbol	Type of Potential Source	PCS Name	Distance from well	WHPA Radius	Proximity Score	Category Score	Final Score
			WHPA 1					
W02	C-2	Cemetery	Bethesda Cemetery Association, Inc	875	1,664	0.47	2	0.95
W02	J-1	Industry	Giegy Chemcial Corp	1,600	1,664	0.04	3	0.12
W02	C-1	Cemetery	Faith Cemetery	1,600	1,664	0.04	2	0.08
W02	B-1	Mini Storage	Dana Properties Mini-Stor	1,600	1,664	0.04	1	0.04
W12	J-3	Industry	Kolcraft (Aberdeen Bins)	775	2,353	0.67	3	2.01
W12	A-2	Gas Station	Pure 211 Fast Mart	800	2,353	0.66	3	1.98
W12	A-1	Gas Station	Alco #27	1,100	2,353	0.53	3	1.60
W12	J-4	Industry	Erico, Inc (CGC Investments, Carolina Galvanizing Corp)	1,125	2,353	0.52	3	1.57
W12	D-1	Auto Repair	Ron's Auto Body	1,200	2,353	0.49	3	1.47
W12	D-2	Auto Repair	Johnson's Radiator Repair	1,300	2,353	0.45	3	1.34
W13	J-2	Industry	Southern States Galvanizing (NC Landscaping)	1,600	2,115	0.24	3	0.73
W16	B-2	Mini Storage	American Mini Storage	1,500	1,931	0.22	1	0.22
W16	B-3	Mini Storage	My Storage Space	1,625	1,931	0.16	1	0.16
W17	E-1	AST	American Tower cell	450	2,307	0.80	2	1.61
W18	D-3	Auto Repair	Crestline Fire Department	1,000	2,189	0.54	2	1.09
W19	F-1	Lift Station	Lift Station 8	1,300	1,384	0.06	2	0.12
			WHPA 2					
W05	I-1	UST	Aberdeen Primary School	2,100	2,174	0.03	3	0.10
W05	C-3	Cemetery	St. Joseph AME Cemetery	2,130	2,174	0.02	1	0.02
W08	H-1	Chemical Storage	Burney True Value Hardware	2,250	2,307	0.02	3	0.07
W08	B-4	Mini Storage	U-Stor-It	2,300	2,307	0.00	1	0.00
W11	G-1	Golf Course	Legacy Lakes Golf Course	750	1,793	0.58	2	1.16
			WHPA 3					
W10	F-2	Lift Station	Lift Station	800	1,612	0.50	2	1.01
W10	B-5	Cemetery	Sandy Mine Self Storage	325	1,612	0.80	1	0.80
			WHPA 5					
W15	C-4	Cemetery	Jackson Hamlet Cemetery	1,300	1,517	0.14	1	0.14
W15	K-1	MHP	Ample Pines MHP	350	1,517	0.77	1	0.77

B-1, B-2, and J-1 are closer to W03 (r = 2420')
D-1, D-2, D-3, A-1 closer to W18 (r = 2189')
A-2, J-3, and J-4 closer to W12 (r = 2353')

Table 5. Risk Analysis for Aberdeen Wells

Contact	Telephone
Aberdeen Municipal Building	(910) 944-1115
After-hours, weekends, emergencies:	(910) 944-7799
Aberdeen Public Works Dept	(910) 944-7012
Aberdeen Planning & Inspection Dept	(910) 944-7024
Southern Pines water system Emergency Connection	(910) 692-2463
Moore County Public Utilities Emergency Connection	(910) 947-4313
Moore County Administrative Office	(910) 947-6363
Moore County Chamber of Commerce	(910) 692-3926
Aberdeen Water Department	(910) 944-7799
Progress Energy	(910) 944-5322
To Report Power Outage	(800) 419-6356
North Carolina Natural Gas Company (NCNG)	(800) 275-6264
Windstream Telephone Company	(800) 347-1991
Time Warner Cable	(910) 692-6648
The Pilot http://www.thepilot.com	(910) 693-2511
The Fayetteville Observer http://fayobserver.com	(800) 682-3476
WCPE Aberdeen 88.3 FM	(910) 556-5178
Star 102.5 FM	(910) 692-2969
WRAL Channel 5	(919) 821-8600

Table 6. Emergency Contact Information

Appendix to Aberdeen Wellhead Protection Plan

Website and database searches conducted
SWAP and Enviromapper interactive mapping database results
Inventory of Potential Contaminant Sources
Oregon Wellhead Protection Program and EPA(1993) risk categories
Well construction records

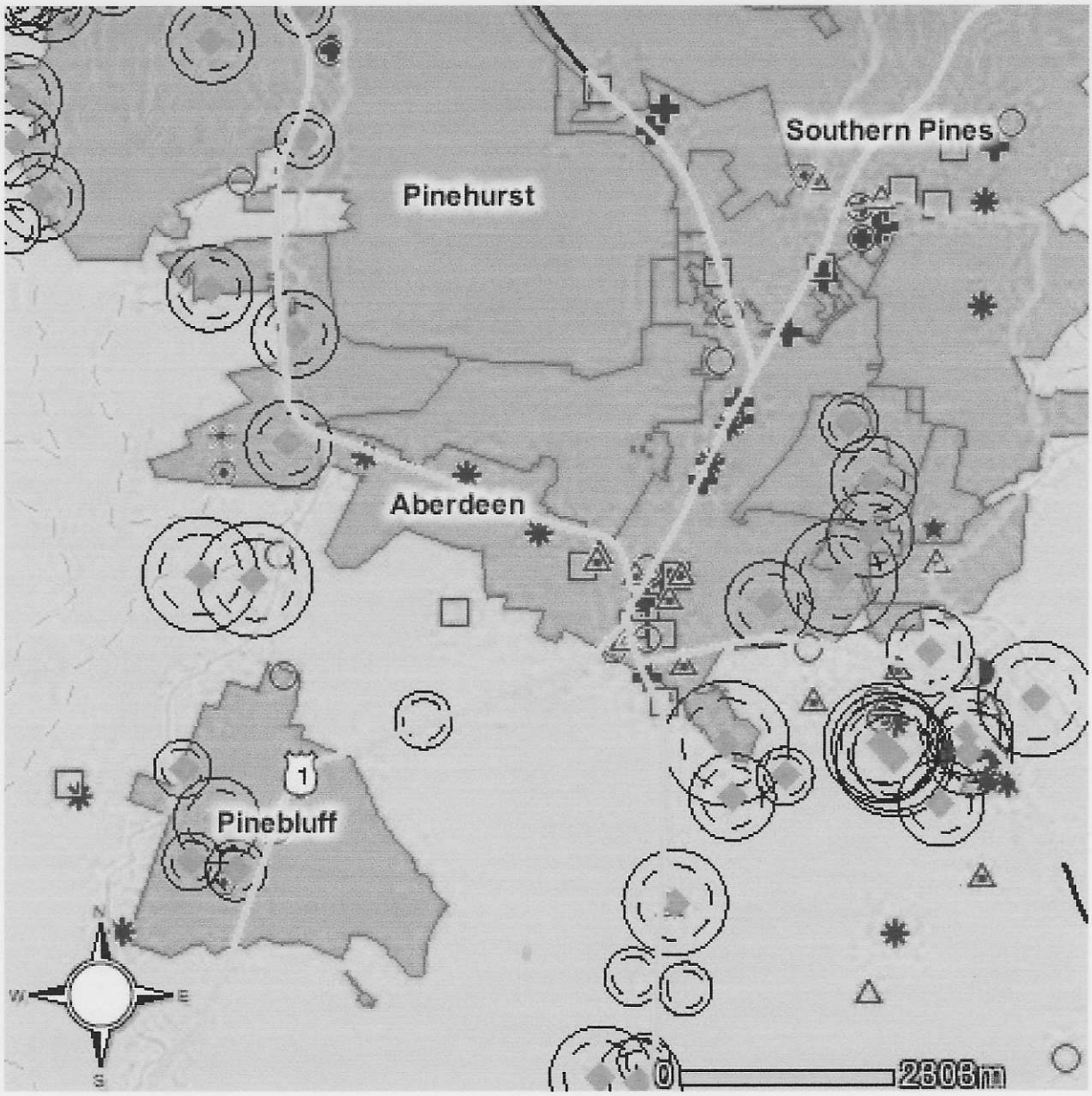
WEBSITE AND DATABASE SEARCH:

1. 2002 Water Supply System Report: http://www.ncwater.org/Water_Supply_Planning/Local_Water_Supply_Plan/search.php

2. EPA's Envirofacts data warehouse (including Enviromapper) for information on air, community water sources, water dischargers, toxic releases, hazardous waste and superfund sites: http://www.epa.gov/enviro/index.html

3. Sourcewater Protection and Assessment in NC for information on Animal Operations, CERCLIS, NPL, NPDES, PCS, RCRA, septage disposal, soil remediation, and Tier II sites, non-discharge permits, landfills, pollution incidents, and UIC and UST permits: http://204.211.89.20/Swap/

Numerous potential sources of contamination (red symbols) in the vicinity of the Aberdeen Wellhead Protection Areas were listed on the Public Water Supply Section's Source Water Assessment Program (SWAP) Website (http://swap.deh.enr.state.nc.us/Swap_app/viewer.htm):



The majority of the potential sources of contamination listed on the SWAP interactive mapper were found outside the Wellhead Protection Areas as a result of the windshield survey.

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol A-1

FACILITY NAME: ALCO #27

ADDRESS:
10870 NC HWY 211E
ABERDEEN, NC 28315

PHONE #: 910 944-0745

OWNER/RP:

PHONE #: 910 206 0035

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

GAS
DIESEL

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol A-2

FACILITY NAME: PURE 211 FAST MART
(J's FOOD MART)

ADDRESS:
10827 NC HWY 211 E
ABERDEEN, NC 28315

PHONE #: (910) 944-2060

OWNER/RP:

PHONE #:

MUNICIPALITY: ABERDEEN WHPA: /

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

GAS
DIESEL

ADDITIONAL INFORMATION:

UST 0-031525

SWAP

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol B-1

FACILITY NAME: DANA PROPERTIES MINI-STOR

ADDRESS: PO BOX 2081 430 ORCHARD RD
SOUTHERN PINES NC 28387

PHONE #:

OWNER/RP: STEVEN DANA

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

HOUSEHOLD HAZARDOUS WASTE

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol B-2

FACILITY NAME: AMERICAN MINI-STORAGE

ADDRESS:
PO BOX 2081
SOUTHERN PINES, NC 28315

PHONE #: (910) 690-2383

OWNER/RP:

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:
HOUSEHOLD HAZARDOUS WASTE

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol B-3

FACILITY NAME: MY STORAGE SPACE

ADDRESS:
136 INDUSTRIAL WAY
ABERDEEN, NC 28315

PHONE #: (910) 281-2088

OWNER/RP:

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

HOUSEHOLD HAZARDOUS WASTE

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol B-4

FACILITY NAME: U-STOR-IT

ADDRESS:
11866 HWY 15-501
ABERDEEN, NC 28315

PHONE #: (910) 716-4010

OWNER/RP:

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

HOUSEHOLD HAZARDOUS WASTE

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol B-5

FACILITY NAME: SANDY MINE SELF-STORAGE

ADDRESS:
120 RIDGELINE DR.
ABERDEEN, NC 28315

PHONE #: (910) 944-0835

OWNER/RP:

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

HOUSEHOLD HAZARDOUS WASTE

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol C1

FACILITY NAME: FAITH CEMETERY

ADDRESS: OLD PEEDEE & RALFORD RD
ABERDEEN, NC

PHONE #: (910) 862-8300

OWNER/RP: FAITH PRESBYTERIAN CHURCH
807 W KING ST
ELIZABETHTOWN, NC 28337

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

CEMETERY

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol C2

FACILITY NAME: BETHESDA CEMETERY ASSOCIATION

ADDRESS:
BETHESDA ROAD
ABERDEEN, NC

PHONE #: (910) 944-1319

OWNER/RP:
BETHESDA CEMETERY ASSOC.
1102 N SANDHILLS BLVD.
ABERDEEN, NC 28315

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:
CEMETERY

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol C-3

FACILITY NAME: ST. JOSEPH AME CEMETERY

ADDRESS:
309 KEYSER ST
ABERDEEN, NC 28315

PHONE #: (910) 944-3365

OWNER/RP:

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:
CEMETERY

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol C-4

FACILITY NAME: JACKSON HAMLET CEMETERY

ADDRESS:
293 DAWKINS RD
ABERDEEN, NC

PHONE #: (910) 295-4211

OWNER/RP:
LOVE GROVE FWB CHURCH
PO BOX 5243
PINEHURST, NC 28374

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

CEMETERY

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol D-1

FACILITY NAME: RON'S AUTO BODY, INC

ADDRESS: 145 CAROLINA RD,
ABERDEEN, NC 28315

PHONE #: (910) 944-7211

OWNER/RP:

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

AUTO RESIDUALS

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol D-2

FACILITY NAME: JOHNSON'S RADIATOR REPAIR

ADDRESS: 163 CAROLINA RD,
ABERDEEN, NC 28315

PHONE #: (910) 944-2835

OWNER/RP:

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

AUTO RESIDUALS

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol D-3

FACILITY NAME: CRESTLINE FIRE DEPT

ADDRESS:
10861 NC HWY 211 E
ABERDEEN, NC 28315

PHONE #: (910) 944-7032

OWNER/RP:

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:
AUTO RESIDUALS

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol E-1

FACILITY NAME: AMERICAN TOWER CELL

ADDRESS:
ABERDEEN CELL SITE - SANDHILLS IND. PARK
ABERDEEN, NC

PHONE #:

OWNER/RP:

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:
EMERGENCY GENERATOR AST

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol F-1

FACILITY NAME: LIFT STATION 8

ADDRESS:
MIDWAY PUMP STA
MIDWAY RD.

PHONE #: (910) 944-7012

OWNER/RP:
TOWN OF ABERDEEN
121 PURNELL CIR
ABERDEEN, NC 28315

PHONE #: (910) 9447799

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol F-2

FACILITY NAME: LIFT STATION

ADDRESS:
AQUA SHED CT

PHONE #: (910) 944-7012

OWNER/RP:
TOWN OF ABERDEEN
121 PURNELL CIR
ABERDEEN, NC 28315

PHONE #: (910) 944-7799

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol G-1.

FACILITY NAME: LEGACY LAKES GOLF COURSE

ADDRESS:
155 LEGACY LAKES WAY
ABERDEEN, NC 28315

PHONE #: (910) 944-2555

OWNER/RP:

PHONE #: (800) 609-9892

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

GOLF COURSE

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol H-1

FACILITY NAME: BURNEY TRUE VALUE HARDWARE

ADDRESS: HWY 15-501 S LAURINBURG RD
ABERDEEN, NC 28315

PHONE #: (910) 944-1516

OWNER/RP:

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

CHEMICAL STORAGE

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol 1-1

FACILITY NAME: ABERDEEN PRIMARY SCHOOL

ADDRESS:
310 KEYSER ST
ABERDEEN, NC 28315

PHONE #: (910) 944-1523

OWNER/RP:
MOORE COUNTY SCHOOLS
5277 HWY 15-501 S PO BOX 1180
CARTHAGE, NC 28327

PHONE #: (910) 947-2976

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

ADDITIONAL INFORMATION:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol J-1

FACILITY NAME: GIEGY CHEMICAL CORP

ADDRESS:
ROUTE 211 4 MILES WEST OF SR 2063
ABERDEEN, NC 28315

PHONE #:

OWNER/RP:

JON BORNHOLM (BORNHOLM.JON@EPA.GOV)

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

ADDITIONAL INFORMATION:
PESTICIDE BLENDING & FORMULATION
SOIL & GROUNDWATER CONTAMINATED
FIVE-YEAR REVIEW COMPLETED SEP 2008

NCD 981927502

http://iaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility
Last updated on Monday, September 19, 2011

Facility Registry System (FRS)

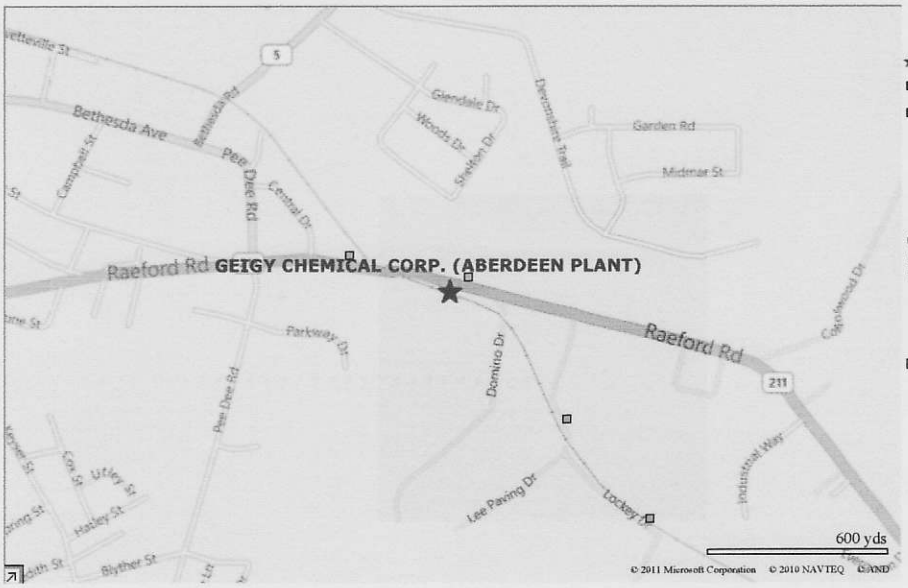
FRS

Facility Detail Report

Report an Error

GEIGY CHEMICAL CORP. (ABERDEEN PLANT)

ROUTE 211 4 MILE WEST OF SR 2063
ABERDEEN, NC 28315
EPA Registry Id: 110009340196



Legend

- ★ Selected Facility
- ▫ EPA Facility of Interest
- ▫ State/Tribe Facility of Interest

The facility locations displayed come from the FRS Spatial Coordinates tables. They are the best representative locations for the displayed facilities based on the accuracy of the collection method and quality assurance checks performed against each location. The North American Datum of 1983 is used to display all coordinates.

Environmental Interests

Information System	Information System ID	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY INFORMATION SYSTEM	NCD981927502	SUPERFUND NPL	CERCLIS		**ICIS**-04-2003-9000 FORMAL ENFORCEMENT ACTION
COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY INFORMATION SYSTEM	NCD986172492	SUPERFUND	CERCLIS		
INTEGRATED COMPLIANCE INFORMATION SYSTEM	41929	FORMAL ENFORCEMENT ACTION	ICIS	06/13/2002	**ICIS**-04-2001-3771 FORMAL ENFORCEMENT ACTION
INTEGRATED COMPLIANCE INFORMATION SYSTEM	43983	FORMAL ENFORCEMENT ACTION	ICIS	01/22/1996	**ICIS**-04-1993-1339 FORMAL ENFORCEMENT ACTION

Additional EPA Reports: MyEnvironment Cleanups in My Community Site Demographics Watershed Report

Standard Industrial Classification Codes (SIC)

No SIC Codes returned.

National Industry Classification System Codes (NAICS)

No NAICS Codes returned.

Facility Codes and Flags

EPA Region:	04
Duns Number:	
Congressional District Number:	06
Legislative District Number:	
HUC Code/Watershed:	03040203 / LUMBER
US Mexico Border Indicator:	NO
Federal Facility:	NO
Tribal Land:	NO

Facility Mailing Addresses

No Facility Mailing Addresses returned.

Contacts

No Contacts returned.

Alternative Names

Alternative Name	Source of Data
RT 211 ABERDEEN PESTICIDES	ICIS
CRESTLINE CONTAMINATED WELL	CERCLIS

Organizations

No Organizations returned.

Query executed on: SEP-19-2011

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol J-2

FACILITY NAME: SOUTHERN STATES GALVANIZING
NC LANDSCAPING

ADDRESS:
421 CAROLINA RD
ABERDEEN, NC 28315

PHONE #:

OWNER/RP:

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

ADDITIONAL INFORMATION:
RCRA NCD986191781

http://iaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility
Last updated on Monday, September 19, 2011

Facility Registry System (FRS)

You are here: EPA Home Envirofacts FRS Report

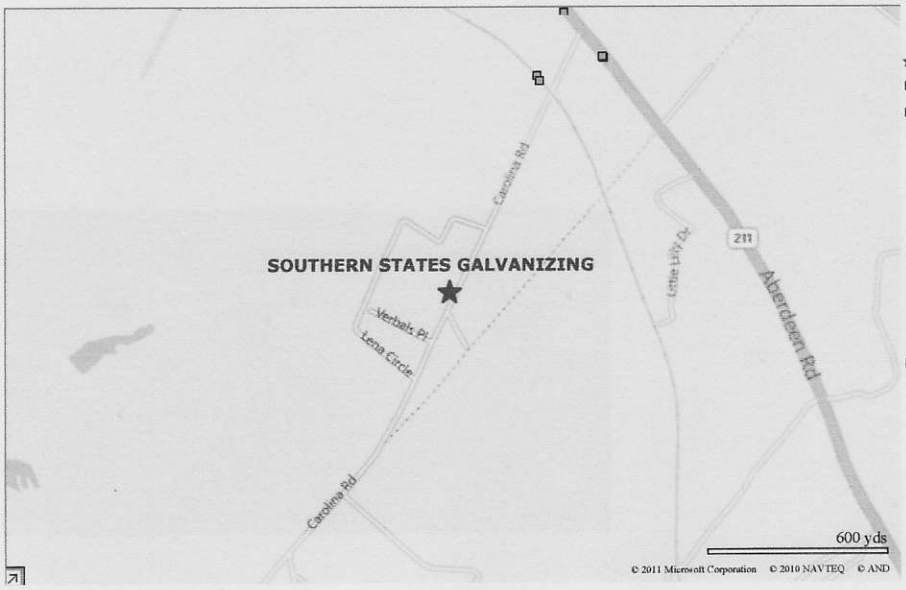
Facility Detail Report

Report an Error

FRS

SOUTHERN STATES GALVANIZING

421 CAROLINA RD.
ABERDEEN, NC 28315
EPA Registry Id: 110000349800



Legend

- ★ Selected Facility
- ▫ EPA Facility of Interest
- ▫ State/Tribe Facility of Interest

The facility locations displayed come from the FRS Spatial Coordinates tables. They are the best representative locations for the displayed facilities based on the accuracy of the collection method and quality assurance checks performed against each location. The North American Datum of 1983 is used to display all coordinates.

Environmental Interests

Information System	Information System ID	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
AIR FACILITY SYSTEM	3712500079	AIR MINOR (INACTIVE)	AIRS/AFS	08/01/2011	
NORTH CAROLINA - FACILITY IDENTIFICATION TEMPLATE FOR STATES	1518	STATE MASTER	NC-FITS		-115DA4YG006X3W64FBEPRFND18 WASTEWATER FACILITY -758 AIR PROGRAM
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM	NCD986191781	UNSPECIFIED UNIVERSE (INACTIVE)	RCRAINFO	01/04/2006	
TOXIC RELEASE INVENTORY SYSTEM	28315STHRNHWY21	TRI REPORTER	TRI REPORTING FORM	05/18/1999	

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Watershed Report

Standard Industrial Classification Codes (SIC)

Data Source	SIC Code	Description	Primary
AIRS/AFS	3479	COATING, ENGRAVING, AND ALLIED SERVICES, NOT ELSEWHERE CLASSIFIED	
TRIS	3499	FABRICATED METAL PRODUCTS, NOT ELSEWHERE CLASSIFIED	
NC-FITS	3479	COATING, ENGRAVING, AND ALLIED SERVICES, NOT ELSEWHERE CLASSIFIED	

National Industry Classification System Codes (NAICS)

Data Source	NAICS Code	Description	Primary
RCRAINFO	33991	JEWELRY AND SILVERWARE MANUFACTURING	

Facility Codes and Flags

EPA Region:	04
Duns Number:	
Congressional District Number:	06
Legislative District Number:	
HUC Code/Watershed:	03040203 / LUMBER
US Mexico Border Indicator:	NO
Federal Facility:	NO
Tribal Land:	NO

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
FACILITY CONTACT	421 CAROLINE RD P O BOX 266	ABERDEEN	NC	28315	NC-FITS
FACILITY MAILING ADDRESS	PO BOX 266	ABERDEEN	NC	28315	RCRAINFO
OWNER	PO BOX 266	ABERDEEN	NC	28315	RCRAINFO
PERMIT CONTACT	421 CAROLINE RD P O BOX 266	ABERDEEN	NC	28315	NC-FITS
REGULATORY CONTACT	421 CAROLINA RD	ABERDEEN	NC	28315	RCRAINFO
FACILITY MAILING ADDRESS	421 CAROLINA ROAD	ABERDEEN	NC	28315	AIRS/AFS
AUTHORIZED CONTACT	421 CAROLINE RD P O BOX 266	ABERDEEN	NC	28315	NC-FITS
FACILITY MAILING ADDRESS	P.O. BOX 266	ABERDEEN	NC	28315	TRIS

Alternative Names

Alternative Name	Source of Data
SOUTHERN GROUNDING LLC	TRI REPORTING FORM
SOUTHERN STATES GALV COMPANY **INACTIVE*	AIRS/AFS
SOUTHERN STATES GALV COMPANY	NC-FITS

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address
PUBLIC CONTACT	ROANLD W.	9109442171	TRIS	

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol J-3

FACILITY NAME: KOLCRAFT (ABERDEEN BINS)

ADDRESS:
10832 HWY 211E
ABERDEEN, NC 28315

PHONE #: (910) 944-9345

OWNER/RP:
JIM SCHMITT

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

NPDES PERMIT NCG080746

ADDITIONAL INFORMATION:

Facility Registry System (FRS)

http://iaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility
Last updated on Monday, September 19, 2011

You are here: EPA Home Envirofacts FRS Report

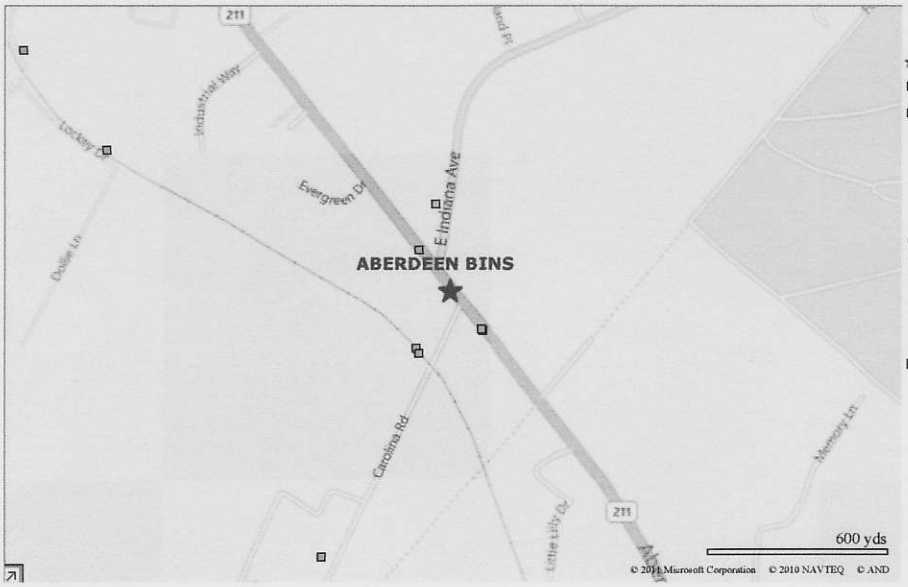
Facility Detail Report

Report an Error

FRS

ABERDEEN BINS

10000 HWY 211 E
ABERDEEN, NC 28315
EPA Registry Id: 110022566043



Legend

- ★ Selected Facility
- ▫ EPA Facility of Interest
- ▫ State/Tribe Facility of Interest

The facility locations displayed come from the FRS Spatial Coordinates tables. They are the best representative locations for the displayed facilities based on the accuracy of the collection method and quality assurance checks performed against each location. The North American Datum of 1983 is used to display all coordinates.

Environmental Interests

Information System	Information System ID	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
PERMIT COMPLIANCE SYSTEM	NCG080746	NPDES NON-MAJOR	NPDES PERMIT	04/13/2007	

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Watershed Report

Standard Industrial Classification Codes (SIC)

Data Source	SIC Code	Description	Primary
PCS	4111	LOCAL AND SUBURBAN TRANSIT	

National Industry Classification System Codes (NAICS)

No NAICS Codes returned.

Facility Codes and Flags

EPA Region:	04
Duns Number:	
Congressional District Number:	06
Legislative District Number:	
HUC Code/Watershed:	03040203 / LUMBER
US Mexico Border Indicator:	NO
Federal Facility:	
Tribal Land:	NO

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
PRIMARY MAILING ADDRESS	2700 NEVADA BLVD	CHARLOTTE	NC	28273	PCS

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address
COGNIZANT OFFICIAL	JIM SCHMITT, FLEET MANAGER	7049277377	PCS	

Alternative Names

Alternative Name	Source of Data
ROLLING FRITO LAY SALES LP ABE	NPDES PERMIT

Organizations

No Organizations returned.

Query executed on: SEP-19-2011

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol J-4

FACILITY NAME: ERICO (CAROLINA GALVANIZING)

ADDRESS:
230 CAROLINA IND. PARK DR.
ABERDEEN, NC 28315

PHONE #: (910) 944-3355

OWNER/RP:

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:

ADDITIONAL INFORMATION:
FIXING, FASTENERS, ELECTRICAL

http://iaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility
Last updated on Monday, September 19, 2011

Facility Registry System (FRS)

You are here: EPA Home Envirofacts FRS Report

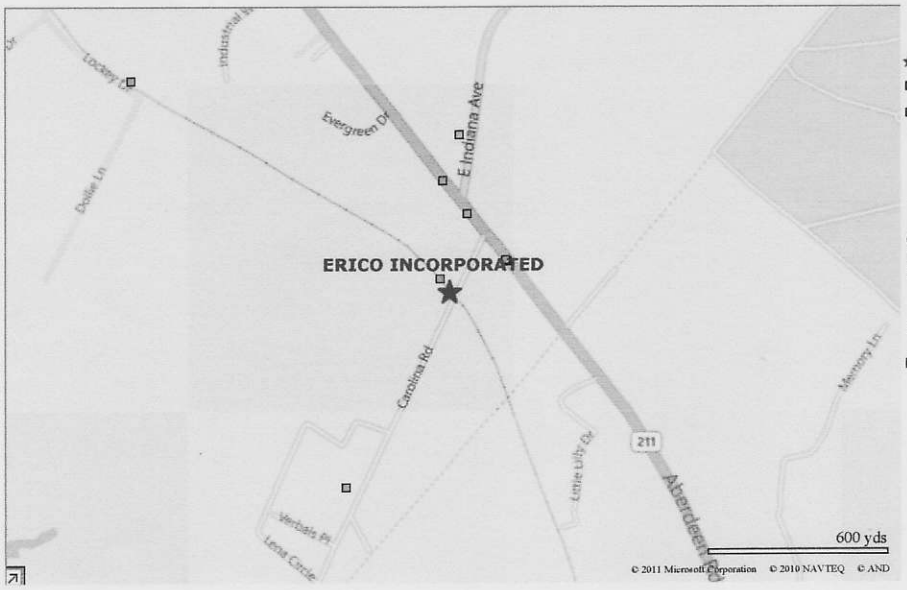
Facility Detail Report

Report an Error

FRS

ERICO INCORPORATED

188 CAROLINA RD.
ABERDEEN, NC 283150487
EPA Registry Id: 110000349793



Legend

- ★ Selected Facility
- ▫ EPA Facility of Interest
- ▫ State/Tribe Facility of Interest

The facility locations displayed come from the FRS Spatial Coordinates tables. They are the best representative locations for the displayed facilities based on the accuracy of the collection method and quality assurance checks performed against each location. The North American Datum of 1983 is used to display all coordinates.

Environmental Interests

Information System	Information System ID	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
AIR FACILITY SYSTEM	3712500085	AIR SYNTHETIC MINOR (ACTIVE)	AIRS/AFS	08/01/2011	
BIENNIAL REPORTERS	NCD986231637	HAZARDOUS WASTE BIENNIAL REPORTER	RCRAINFO	12/31/2003	
EMISSION INVENTORY SYSTEM (EIS)	7724711	CRITERIA AND HAZARDOUS AIR POLLUTANT INVENTORY	EIS		
NORTH CAROLINA - FACILITY IDENTIFICATION TEMPLATE FOR STATES	1538	STATE MASTER	NC-FITS		-835 AIR PROGRAM
NATIONAL EMISSIONS INVENTORY	NEI43590	CRITERIA AND HAZARDOUS AIR POLLUTANT INVENTORY	NEI		
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM	NCD986231637	SQG (ACTIVE)	RCRAINFO	01/22/2009	
TOXIC RELEASE INVENTORY SYSTEM	28315CRLNGSR207	TRI REPORTER	TRI REPORTING FORM	06/21/2006	

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Watershed Report

Standard Industrial Classification Codes (SIC)

Data Source	SIC Code	Description	Primary
FRS	3643	CURRENT-CARRYING WIRING DEVICES	
TRIS	3643	CURRENT-CARRYING WIRING DEVICES	
FRS	3644	NONCURRENT-CARRYING WIRING DEVICES	
NC-FITS	3471	ELECTROPLATING, PLATING, POLISHING, ANODIZING, AND COLORING	
TRIS	3471	ELECTROPLATING, PLATING, POLISHING, ANODIZING, AND COLORING	
NEI	3471	ELECTROPLATING, PLATING, POLISHING, ANODIZING, AND COLORING	
AIRS/AFS	3471	ELECTROPLATING, PLATING, POLISHING, ANODIZING, AND COLORING	

National Industry Classification System Codes (NAICS)

Data Source	NAICS Code	Description	Primary
EIS	332813	ELECTROPLATING, PLATING, POLISHING, ANODIZING, AND COLORING.	
RCRAINFO	335931	CURRENT-CARRYING WIRING DEVICE MANUFACTURING.	
TRIS	332813	ELECTROPLATING, PLATING, POLISHING, ANODIZING, AND COLORING.	
NC-FITS	332813	ELECTROPLATING, PLATING, POLISHING, ANODIZING, AND COLORING.	
AIRS/AFS	332813	ELECTROPLATING, PLATING, POLISHING, ANODIZING, AND COLORING.	
FRS	335931	CURRENT-CARRYING WIRING DEVICE MANUFACTURING.	
RCRAINFO	335932	NONCURRENT-CARRYING WIRING DEVICE MANUFACTURING.	
NEI	332813	ELECTROPLATING, PLATING, POLISHING, ANODIZING, AND COLORING.	

Facility Codes and Flags

EPA Region:	04
Duns Number:	093780765
Congressional District Number:	06
Legislative District Number:	
HUC Code/Watershed:	03040203 / LUMBER
US Mexico Border Indicator:	NO

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
OWNER	34600 SOLON	SOLON	OH	44139	RCRAINFO

Facility Registry System (FRS)

http://iaspub.epa.gov/enviro/fii_query_dtl.disp_program_facility
Last updated on Monday, September 19, 2011

You are here: EPA Home Envirofacts FRS Report

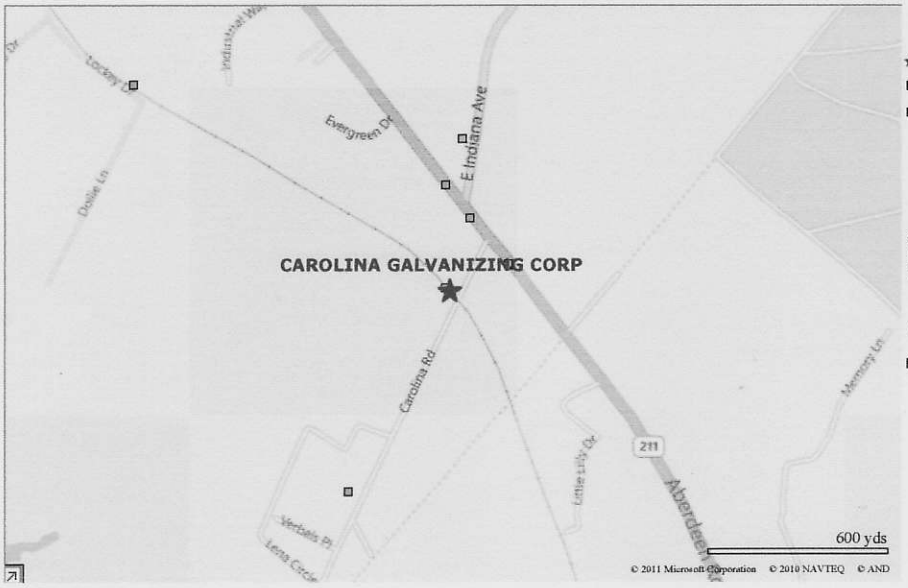
Facility Detail Report

Report an Error

FRS

CAROLINA GALVANIZING CORP

230 CAROLINA INDUSTRIAL PK DR
ABERDEEN, NC 28315
EPA Registry Id: 110000700992



Legend

- ★ Selected Facility
- ▫ EPA Facility of Interest
- ▫ State/Tribe Facility of Interest

The facility locations displayed come from the FRS Spatial Coordinates tables. They are the best representative locations for the displayed facilities based on the accuracy of the collection method and quality assurance checks performed against each location. The North American Datum of 1983 is used to display all coordinates.

Environmental Interests

Information System	Information System ID	Environmental Interest Type	Data Source	Last Updated Date	Supplemental Environmental Interests:
COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY INFORMATION SYSTEM	NCD048181218	SUPERFUND	CERCLIS		
RESOURCE CONSERVATION AND RECOVERY ACT INFORMATION SYSTEM	NCD048181218	CESQG (ACTIVE)	NOTIFICATION (RCRA)	01/04/2006	

Additional EPA Reports: MyEnvironment Enforcement and Compliance Site Demographics Watershed Report

Standard Industrial Classification Codes (SIC)

Data Source	SIC Code	Description	Primary
FRS	3469	METAL STAMPINGS, NOT ELSEWHERE CLASSIFIED	

National Industry Classification System Codes (NAICS)

Data Source	NAICS Code	Description	Primary
RCRAINFO	332116	METAL STAMPING.	
RCRAINFO	332813	ELECTROPLATING, PLATING, POLISHING, ANODIZING, AND COLORING.	
RCRAINFO	33991	JEWELRY AND SILVERWARE MANUFACTURING	

Facility Codes and Flags

EPA Region:	04
Duns Number:	051946197
Congressional District Number:	06
Legislative District Number:	
HUC Code/Watershed:	03040203 / LUMBER
US Mexico Border Indicator:	NO
Federal Facility:	
Tribal Land:	NO

Facility Mailing Addresses

Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
REGULATORY CONTACT	1329 SANDHILLS BLVD	ABERDEEN	NC	28315	RCRAINFO
OWNER	1329 SANDHILLS BLVD	ABERDEEN	NC	28315	RCRAINFO
FACILITY MAILING ADDRESS	1329 SANDHILLS BLVD	ABERDEEN	NC	28315	RCRAINFO

Alternative Names

Alternative Name	Source of Data
CGC INVESTMENTS	NOTIFICATION (RCRA)

Contacts

Affiliation Type	Full Name	Office Phone	Information System	Mailing Address
REGULATORY CONTACT	STEPHEN CRAVEN	9109448801	RCRAINFO	View

Organizations

Affiliation Type	Name	DUNS Number	Information System	Mailing Address
OWNER	STEPHEN CRAVEN		RCRAINFO	View

Query executed on: SEP-19-2011

Additional information for CERCLIS or TRI sites:

INVENTORY OF POTENTIAL CONTAMINATION SOURCES

Map Symbol K-1

FACILITY NAME: AMPLE PINES MHP

ADDRESS:
136 AMPLE PINES
ABERDEEN, NC 28315

PHONE #:

OWNER/RP:
W. WILLIAMS
360 AMPERSAND RD
ABERDEEN, NC 28315

PHONE #:

MUNICIPALITY: ABERDEEN WHPA:

POTENTIAL CONTAMINATION SOURCES: QUANTITY:
HOUSEHOLD HAZ. WASTE

ADDITIONAL INFORMATION:

Potential Contamination Sources by Risk Category

Higher Risk Potential Contamination Sources for Ground Water PWS Systems

COMMERCIAL/INDUSTRIAL

° Automobile Body shops
Gas stations
Repair shops

° Chemical /petroleum processing/storage
° *Sewer lines
° Utility right-of-way/pesticide use
° Chemical/petroleum pipelines
° Wood/pulp/paper processing and mills
° Dry cleaners
° Electrical/electronic manufacturing
° Fleet/trucking/bus terminals
° Furniture repair/manufacturing
° Home manufacturing
° Junk/scrap/salvage yards
° Machine shops
° Metal plating/finishing/fabricating
° Mines/sand or gravel excavations
° Parking lots/malls (>50 spaces)
° Photo processing/printing
° Plastics/synthetics producers
° Research laboratories

OTHER

° Road salt storage areas
° Military installations (for classified risks not otherwise listed)

AGRICULTURAL/RURAL

° Farm machinery repair
° Rural machine shops
° *Intensive livestock operations; Lagoons, spray fields
° Fertilizer, pesticide, and petroleum storage, distribution, handling, mixing, and cleaning areas
°*Sewage sludge (biosolids) storage, handling, mixing and cleaning areas
° *Sewage sludge (biosolids) land application
° Unauthorized/illegal disposal of wastes/chemicals

RESIDENTIAL/MUNICIPAL

° Airports - maintenance/fueling areas
° Railroad yards/maintenance/fueling areas
° Landfills/dumps
° Utility stations - maintenance areas
° *Septic systems - high density (>1/acre)
° *Sewer lines
° *Stormwater drains/discharges
° Fertilizer, pesticide, sewage sludge

Notes: 1. This is a list of potential sources of contamination not a list of known databases of contaminants.

2. Higher risk potential contaminant sources are considered to have a higher potential for drinking water contamination than those designated moderate risk or lower risk Facility-specific management practices are not taken into account in estimating risks and assigning these categories.

3. An asterisk [*] indicates activities that may be associated with microbiological contamination.

Potential Contamination Sources by Risk Category (Con't)

Moderate Risk PCSs

COMMERCIAL/INDUSTRIAL

° Car washes
° Cement/concrete plants
° Food processing
° Hardware/lumber/parts stores

AGRICULTURAL/RURAL

° *Auction lots
° *Boarding stables
° Crops, irrigated (berries, Christmas trees, hops, mint, orchards, vineyards, nurseries, greenhouses, vegetables, sod)
NOTE: Drip-irrigated crops are considered lower risks.
° Drinking water treatment plant residuals/sludge application

RESIDENTIAL/MUNICIPAL

° Drinking water treatment plants
° Golf courses
° Housing - high density (>1 house/.5 acres)
° Motor pools
° Parks
° Waste transfer/recycling stations
Wastewater treatment plants collection stations

OTHER

° Above ground storage tanks
° Construction/demolition areas
° Hospitals
° Transportation corridors
Freeways/state highways
Railroads
Right-of-way maintenance (herbicide use areas)
° Irrigation, water supply, or monitoring wells

Lower Risk PCSs

COMMERCIAL/INDUSTRIAL

° Office buildings/complexes
° RV/mini storage

AGRICULTURAL/RURAL

° Crops, non-irrigated (grains, grass seeds, hay)
° *Rangeland
° Managed forests/silviculture

RESIDENTIAL/MUNICIPAL

° Apartments and condominiums
° Campgrounds/RV parks
° Fire stations
° Schools
° Housing – low density (< 1 house/.5 acres)

OTHER

° Medical/dental offices/clinics
° Veterinary offices/clinics

SOURCE: Adapted from EPA (1993), and from the Oregon Wellhead Protection Program

N.W.W.A.

N.C.W.W.A.

LOG OF DRILLING

Well # 2

Aberdeen, North Carolina (Town of Aberdeen)

0	--	1	Top soil
1	-	15	Sandy clay
15	-	23	Sand
23	-	70	Sand and clay (dry)
70	-	155	Sand
155	-	180	Sand and clay (mostly clay)
180	-	186	Clay
186	-	190	Sand and clay
190	-	192	Rock

LOG OF CASING IN WELL

Pit casing 18" 26'

LOG OF 8 INCH CASING

#1	22'	4"	Blank
#2	21'	6"	"
#3	21'	10"	"
#4	20'	2"	"
#5	[illegible]		"
[illegible]			[illegible] ass Steel Screen (8 inch I.D.)
#7	10'		Blank
#8	30'	8"	Stainless Steel Screen (8 inch I.D.)
#9	12'	8"	Blank

II 2

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Co.
Well Owner: Town of Aberdeen Address:
Pumped Well No.: 2 Location: Bethesda Road NC #15 County: Moore
Observation Well Locations:
Airline Lengths: Pumped Well 117' Observation Wells
Remarks:

Pumping rate measured with: 2½ X 4 orifice Water levels measured with: Air Line

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading PSI	Ft. to Water	Remarks
6/28/67							
8:40					42		
8:45	Started	18					
8:50		21	119		35		
9:00		22	123				
9:45		23	126		20		
10:00		23	120		0-20		
10:30		23	126		0-20		
11:00		23	126		0-24		
11:30		23	126		0-24		
12:00		23	129		0-24		
12:30		23	126		0-24		
1:00		23	126		0-30		
1:30		23	126		0-24		
2:00		23	126		0-24		
2:30		23	126		0-24		
3:00		23	126		0-24		
3:30		23	126		0-24		
4:00		23	126		0-18		
4:30		23	126		0-18		
5:00		23	126		0-18		
5:30		23	126		0-18		
6:00		23	126		0-18		
6:30		23	126		0-18		
7:00		23	126		0-18		
7:30		23	126		0-18		
8:00		23	126		0-18		
8:30		22	126		0-18		
9:00		22	126		0-18		
9:30		23	126		16		
10:00		23	126		16		
10:50		24	126		15		
11:00		23	126		16		
11:30		23	226		16		
12:00		23	126		16		
12:30		23	126		16		
1:00		23	126		16		
1:30		23	126		16		
2:00		24	130		14		
2:30		24	130		14		
3:00		24	130		14		
3:30		24	130		14		
4:00		24	130		14		
4:30		24	130		14		

LOG OF CASING

WELL # 3

ABERDEEN, N. C.

# 1	23' 6"	8" blank pipe		
2	23' 6"			
3	24' 4"			
4	22' 2"			
5	2' 6"			
6	5' 4"	8" ID Stainless Steel Screen	95'	
7	10'	blank pipe	105	
8	31' 2"	8" ID Stainless Steel Screen	136	
9	11' 8"	blank pipe	147'	

LOG OF PIT CASING

26' 18" x ¼ wall pit casing cemented in place with 25 bags of cement. Approximately 25 tons gravel placed in well.

3

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Co. W. Pickard
Well Owner: Town of Aberdeen Address: Aberdeen, N.C.
Pumped Well No.: 3 Location: North East of B. Church County: Moore
Observation Well Locations:
Airline Lengths: Pumped Well 126 Feet Observation Wells
Remarks: One Pumping Test run for 12 hours At 250 G.P.M.

Pumping rate measured with: 4"x6" orfice Water levels measured with: Air Line

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading ~~Feet~~ P.S.I	Feet to Water	Remarks
10.25							
11:30	Started				22	75.18	
11.36	10	19					
11:45	20	18	271				
12:00	36	19	278		18	94.42	
12:30	66	18 1/2	275		14	93.64	
1:00	96	18 1/2	275		14	93.64	
1.30	126	19	271		12	98.24	
2.00	156	19 1/2	275		12	98.24	
2.30	186	19	278		12	98.24	
3:00	216	19	278		12	98.24	
3.30	246	19	278		12	98.24	
4.00	276	18 1/2	275		12	98.24	
4.30	306	18 1/2	275		10	102.90	
5.00	336	18 1/2	275		10	102.90	
5.30	366	18	271		10	102.90	
6.00	396	18 1/2	275		10	102.90	
6.30	426	18 1/2	275		10	102.90	
7.00	456	18 1/2	275		10	102.90	
7.30	486	18 1/2	275		10	102.90	
8.00	516	18 1/2	275		10	102.90	
8.30	546	18 1/2	275		10	102.90	
9.00	576	18 1/2	275		10	102.90	
9.30	606	18 1/2	275		10	102.90	
10.00	636	19	278		10	102.90	
10.30	666	19	278		10	102.90	
11.00	696	19	278		10	102.90	
11.30	726	19	278		10	102.90	
12.00	756	19	278		10	102.90	
12.30	786	18 1/2	275		10	102.90	
1.00	816	18 1/2	275		10	102.90	
1.30	846	18 1/2	275		10	102.90	
2.00	876	19	278		10	102.90	
2:30	906	19	278		10	102.90	
3.00	936	18 1/2	275		10	102.90	
3.00	966	18 1/2	275		10	102.90	
4:00	996	18 1/2	275		10	102.90	
4:30	1026	18 1/2	275		10	102.90	
5.00	1056	18 1/2	275		10	102.90	
5:30	1086	18 1/2	275		10	102.90	
6:00	1116	18 1/2	275		10	102.90	
6:30	1146	18 1/2	275		10	102.90	
7.00	1176	18 1/2	275		10	102.90	
7:30	1206	18 1/2	275		10	102.90	
8:00	1236	18 1/2	275		10	102.90	

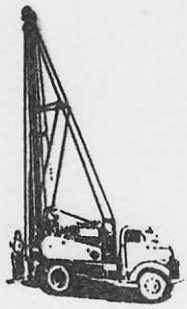
CAROLINA WELL AND PUMP COMPANY, INC.

Complete Well and Pump Service

P. O. BOX 1085 TELEPHONE 776-3415

SANFORD, NORTH CAROLINA 27330

N.W.W.A.
N.C.W.W.A.



DRILLERS LOG

TEST WELL NO. 5

ABERDEEN, N. C.

0-1	Top Soil
1-3	Sand
3-18	Sand & Clay
18-22	White Clay
22-60	Course Sand
60-82	Sand & Gravel
82-84	Clay
84-100	Sand & Gravel
100-114	Sand, Gravel, & Clay
114-120	Clay
120-130	Sand, Gravel, & Clay
130-180	Clay
180-200	Rock

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Company — Worth Pickard
Well Owner: Town of Aberdeen — Address: Aberdeen, N.C.
Pumped Well No.: 5 — Location: Berkely Hill — County: Moore
Observation Well Locations:
Airline Lengths: Pumped Well — Observation Wells
Remarks:

Pumping rate measured with: 4 X 6 Orfice — Water levels measured with: E. Tape

Recovery			Pump Well Data				
Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Fe to Water	Remarks
12:01						101	
12:02						97	
12:03						96.2	
12:04						96	
12:05						95.7	
12:07						95.5	
12:10						95.1	
12:12						94.11	
12:14						94.8	
12:16						94.7	
12:18						94.5	
12:20						94.3	
12:25						93.11	
12:30						93.9	
12:35						92.10	
12:40						92.8	
12:45						92.3	
12:50						91.8	
12:55						91.3	
1:00						91.0	
1:10						90.10	
1:20						90.7	
1:30						90.5	
1:40						90.2	
1:50						89.11	
2:00						89.4	
2:15						88.10	
2:30						88.10	
2:45						88.7	
3:00						88.7	

CAROLINA WELL AND PUMP COMPANY, INC.
Complete Well and Pump Service

N.W.W.A.
N.C.W.W.A.

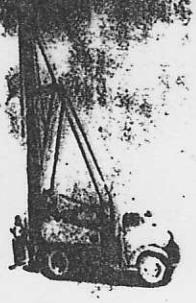
P.O. BOX 28
SANFORD, N. C.

TELEPHONE 776-3415

LOG OF CASEING IN WELL AT ABERDEEN
Well No. 5 (Old #4)

No. 1	20'11"	8" Standard Pipe
No. 2	23'	8" Standard Pipe
No. 3	20'7"	8" Standard Pipe
No. 4	6'	8" Standard Pipe
No. 5	5'4"	8" Stainless Steel Well Screen
No. 6	8'	8" Standard Weight Caseing
No. 7	20'4"	Stainless Steel Well Screen
No. 8	8'	Standard Weight Pipe
No. 9	24'3"	Standard Weight Pipe
No. 10	20'4"	Stainless Steel Screen
No. 11	12'	Standard Weight Pipe
	20 Tons of Gravel	
	157 feet 1" Measured Pipe	
	21 feet 20" Pit Caseing Cemented in Place	

CAROLINA
Complete Well and Pump Service
P. O. BOX 1085
TELEPHONE 776-3415
SANFORD, NORTH CAROLINA 27330
N.W.W.A.
N.C.W.W.A.



DRILLERS LOG. TEST WELL NO. 6

ABERDEEN, N.C.

0-1	Top Soil
1-8	Sand
8-18	Sand & Clay
18-24	Clay
24-34	Sand, Gravel, & Clay
34-38	Clay
38-58	Sand
58-84	Sand Gravel with Clay
84-101	Sand & Gravel
101-111	Gravel
111-128	Sand Gravel with Clay
128 -138	Sand & Clay
138-144	Clay & Gravel
144-155	Clay
155-160	Sand, Gravel & Clay
160-190	Clay
190-194	Sand & Clay
194-200	Rock (Hard)

6

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Company, Inc. Tom Myles
Well Owner: Town of Aberdeen Address: Aberdeen, N.C.
Pumped Well No.: 6 Location: 1 mile from Reid Road Fort Bragg Rd. County: Moore
Observation Well Locations:
Airline Lengths: Pumped Well 100 Observation Wells
Remarks:

Pumping rate measured with: Orifice 3x4 Water levels measured with: Guage Airline

Pump Well Data

Date and Time 7/1/71	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
1:55	Started Test					49	
2:00	5	15	162			64	
2:05	10	15	162			68	
2:10	15	15	162			70	
2:15	20	15	162			70	
2:20	25	15	162			74	
2:25	30	15	162			74	
2:30	35	15	162			76	
2:35	40	15	162			76	
2:40	45	15	162			76	
2:45	50	15	162			78	
2:50	55	15	162			78	
2:55	60	15	162			78	
3:00	65	15	162			78	
3:05	70	15	162			78	
3:10	75	15	162			78	
3:15	80	15	162			78	
3:30	95	15	162			78	
4:00	125	15	162			78	
5:00	185	15	162			78	
6:00	245	15	162			78	
7:00	305	15	162			80	
8:00	365	15	162			80	
9:00	425	15	162			80	
10:00	485	15	162			80	
11:00	545	15	162			80	
12:00	605	15	162			80	
1:00	665	15	162			80	
2:00	725	15	162			80	
3:00	785	15	162			80	
4:00	845	15	162			80	
5:00	905	15	162			80	
6:00	965	15	162			80	
7:00	1025	15	162			80	
8:00	1085	15	162			80	
9:00	1145	15	162			80	
10:00	1205	15	162			80	
11:00	1265	15	162			80	
12:00	1325	15	162			80	
1:00	1385	15	162			80	
2:00	1445	15	162			80	
RECOVERY							
2:02	2					56	
2:04	4					56	
2:06	6					56	

PUMPING TEST DATA

Test conducted by: _____

Well Owner: _____ Address: _____

Pumped Well No.: _____ Location: _____ County: _____

Observation Well Locations: _____

Airline Lengths: Pumped Well _____ Observation Wells _____

Remarks: _____

Pumping rate measured with: _____ Water levels measured with: _____

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
2:08	8					54	
2:10	10					54	
2:15	15					54	
2:20	20					54	
2:25	25					54	
2:30	30					50	
2:35	35					50	
2:40	40					50	
2:45	45					50	
2:50	50					50	
3:00	60					50	
4:30	150					50	
5:00	180					50	

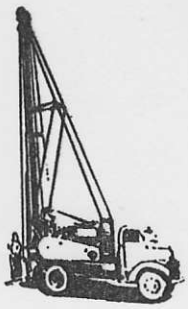
CAROLINA WELL AND PUMP COMPANY, INC.

Complete Well and Pump Service

P. O. BOX 1085 TELEPHONE 776-3415

SANFORD, NORTH CAROLINA 27330

N.W.W.A.
N.C.W.W.A.



DRILLERS LOG

TEST WELL NO. 7

ABERDEEN, N. C.

WELL LOCATION SAND CLAY ROAD

0-1	Top Soil
1-3	Hard Sand
3-15	Clay
15-50	Sand
50-55	Clay
55-70	Sand
70-75	Clay & Sand
75-80	Clay
80-190	Sand
190-195	Clay & Sand
195-205	Sand
205-230	Clay
230-	Rock

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Co., Inc. Donald Hammonds

Well Owner: Town of Aberdeen Address: Aberdeen

Pumped Well No.: 7 Location: on Hill Fort Bragg Road County: Moore

Observation Well Locations:

Airline Lengths: Pumped Well Observation Wells

Remarks:

Pumping rate measured with: 3 X 4 Orifice Water levels measured with: Airline

Pump Well Data

Date and Time 7/29/71	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
6:30	Started Test					98	Static Water leve
6:35	5	23	200			110	
6:40	10	23	200			116	
6:45	15	23	200			118	
6:50	20	23	200			120	
6:55	25	23	200			120	
7:00	30	23	200			122	
7:05	35	23	200			124	
7:10	40	23	200			124	
7:15	45	23	200			124	
7:20	50	23	200			124	
7:25	55	23	200			124	
7:30	60	23	200			124	
7:35	65	23	200			124	
7:40	70	23	200			124	
7:45	75	23	200			124	
8:00	90	23	200			124	
8:15	105	23	200			124	
8:30	120	23	200			124	
9:00	~~135~~ 150	23	200			124	
10:00	210	23	200			124	
11:00	270	23	200			124	
12:00	330	23	200			124	
1:00	390	23	200			124	
2:00	450	23	200			124	
3:00	510	23	200			126	
4:00	570	23	200			126	
5:00	630	23	200			126	
6:00	690	23	200			126	
7:00	750	23	200			126	
8:00	810	23	200			126	
9:00	870	23	200			126	
10:00	930	23	200			126	
11:00	990	23	200			126	
12:00	1050	23	200			126	
1:00	1110	23	200			126	
2:00	1170	23	200			126	
3:00	1230	23	200			126	
4:00	1290	23	200			126	
5:00	1350	23	200			126	
6:00	1410	23	200			126	
6:30	1440	23	200			126	
RECOVERY							
6:32	2					118	
6:34	4					116	

PUMPING TEST DATA

ucted by: _____

wner: _____ Address: _____

mped Well No.: _____ Location: _____ County: _____

Observation Well Locations: _____

Airline Lengths: Pumped Well _____ Observation Wells _____

Remarks: _____

Pumping rate measured with: _____ Water levels measured with: _____

Pump Well Data

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
6:36	6					114	
6:38	8					110	
6:40	10					110	
6:45	15					110	
6:50	20					108	
6:55	25					108	
7:00	30					106	
7:05	35					104	
7:10	40					104	
7:15	45					104	
7:30	60	Started Pulling Pump				104	
7:45	75					102	
8:00	90					102	
8:30	120					102	
9:00	150					102	
10:00	210					102	
11:00	270					102	
12:00	330					102	

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 11/20/02

PWS: 03 63 020

Owner Assigned

Source Code	Well Name (If purchase, name of seller)	Code
W08	WELL 8	G

Code: G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence

If purchase, seller ID#	Source Begin Date MM - YY	Direct Influence Date MM - DD - YY	Availability
			P

Availability: P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other

Location of well within the system (If purchase, location of master meter)

SR 2063 .4 MILE FROM HWY 501

Latitude (N) Deg. Min Sec	Longitude (W) Deg Min Sec	How Determined
35-06-46.25	79-25-07.99	G

How Determined: G=GPS, M=Map, S=Surveyed, D=Differential GPS

GPS File Name: 090717B

If purchase, use seller's primary source lat/long)

Vulnerable VOC's: [ ] Y / N

Assessment Date (MM - DD - YY):

ENTRY POINT INFORMATION

Owner Assigned

Entry Point Code	Entry Point Name
E08	WELL 8

Use Code	Availability	Entry Point Begin Date MM / YY	Entry Point End Date MM / YY
C	P		

Use Code: C=Ground/Permanent, D=Ground/non-Permanent

Availability: P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other

Location: WELL 8

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y/N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: GOOD

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N)

Condition of house: GOOD Type of freeze protection: HEAT

Well: Diameter: 8 Type: DRILLED Yield (gpm): Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 200 ft (If unknown, put 'UNK') Well depth: 200 Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Size: 3'

Size of blow-off: 4" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 260 HP: 20 Pump intake depth: Auxiliary Power? (Y,N)

Type pump: TURBINE Height above floor (pump/casing): / 6"

Storage at well site Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. gpm hp 2. gpm hp 3. gpm hp Auxiliary power? (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where?

If purchase, retreat? (Y/N) If yes, complete back of form.

PLANT INFORMATION

Function Code [H] H=Well Head M=Pumping Fac. R=Storage Fac. T=Treatment Plt O=Other Plt./ Fac.

Plant Type [G] G=Ground Y=G w/direct influence

PWSS Assigned Code: P08

Plant Name: WELL 8

Availability [P] P= Permanent E=Emergency S=Seasonal I=Interim Source O=Other

Use Treatment Code Worksheet for assistance and if more space is needed. All 5 boxes must be filled in for treatment.

DISINFECTION

Treatment Code [D 4 210] Gas Post 4010 Pre 4030 Hypo Post 4210 Pre 4230 Chlorinator Make: CHEM TECH

Conditior GOOD Capacity: 30 GPD In Service? Y (Y,N) Spare Parts? Y (Y,N)

Proper Vent.? ___ (Y,N) Gas Mask? ___ (Y,N) SCBA? ___ (Y,N) Scales? ___ (Y,N) Autoswitch? ___ (Y,N) Alarms? ___ (Y,N)

Other type of disinfection: ___

IRON/MANGANESE TREATMENT REMOVAL

Polyphosphate (F/M) [6800] [6800] Type: ___

Pump Make: ___ Capacity: ___ Condition: ___ In service? ___ (Y,N)

Oxidant Code [F] [M] If pumped, make: ___

Capacity: ___ Condition: ___ In service? ___ (Y,N)

Filter(s): No. of: ___ Size: ___ Code [F] [M] 4600 Ion Exc. 3430 Greensand Head Loss Gauges? ___ (Y,N)

Media: ___ Controls: ___ M=Manual F=Flow Meter C=Time Clock In service? ___ (Y,N)

Backwash Treatment: ___ Disposal: ___

pH ADJUSTMENT

Chemical Used: SODA ASH Code [7 403] 7401 Caustic 7402 Lime 7403 Soda Ash

Pump Make: ALL DOS Capacity: 171 GPD Condition: GOOD In service? Y (Y,N)

CORROSION CONTROL (OTHER THAN pH)

Chemical Used: ___ Code [C 4]

Pump Make: ___ Capacity: ___ Condition: ___ In service? ___ (Y,N)

SOFTENING (ION EXCHANGE [S 4 6 0 0]) ___ (Y,N)

Filter(s): No. of: ___ Size: ___ Condition: ___

Controls: ___ M=Manual F=Flow Meter C=Time Clock In service? ___ (Y,N) Disposal: ___

Head Loss Gauges? ___ (Y,N)

OTHER TREATMENT

Code [3801] Description: SODIUM FLUORIDE

Code [ ] Description: ___

COMMENTS:

___

___

WATER AND WASTE WATER EQUIPMENT, SALES AND SERVICE

ENVIRONMENTAL PRODUCTS, INC

P. O. BOX 2385 • HICKORY, N. C. 28601 • 704/322-7003

TO ALL BIDDING CONTRACTORS

PROJECT: Water and Sewer Improvements

LOCATION: Aberdeen, North Carolina

ENGINEERS: Wm. F. Freeman

BID DATE: January 15, 1980 - 2:00 p.m.

SUBJECT: Well Pumps - No. 8-9-3

Gentlemen:

We are pleased to recommend and quote you below on the above subject equipment.

Well No. 8 - CONDITIONS: 250 GPM @ 224' TDH
Setting: 140'

One (1) Fairbanks Morse 8-stage 8M, figure 7000 vertical water lubricated turbine pump complete with:

A. Two (2) 5' x 6" column sections.
B. Thirteen (13) 10' x 6" column sections.
C. Two (2) 5' x 1" line shaft sections with stainless steel sleeves and bearings.
D. Thirteen (13) 10' x 1" line shaft sections with stainless steel sleeves and bearings.
E. One (1) 12" x 6" "D" surface discharge head with foundation plate and two-piece top shaft.
F. One (1) 20 HP, 3-60-208 volt, 1800 RPM, VHS motor with NRC.
G. 140' of ¼" plastic air line water level gauge, air line bracket and hand pump.

Your cost for well pump No. 8 is . . . . . .$6,970.00.

Well No. 9 - CONDITIONS: 100 GPM @ 220' TDH
Setting: 140'

One (1) 13-stage M6E water lubricated turbine bowl assembly complete with:

A. Two (2) 5' x 5" column sections.
B. Thirteen (13) 10' x 5" column sections.
C. Two (2) 5' x 1" line shaft sections with stainless steel sleeves and bearings.
D. Thirteen (13) 10' x 1" line shaft sections with stainless steel sleeves and bearings.
E. One (1) 12" x 6" "D" surface discharge head with foundation plate and two-piece top shaft.

F. One (1) 10 HP, 3-60-208 volt, 1800 RPM VHS motor with NRC.
G. 140' of ¼" plastic air line water level gauge, air line bracket and hand pump.

Your cost for well pump No. 9 is . . . . . .$6,084.00.

Well Pump No. 3 - CONDITIONS: 220 GPM @ 345' TDH
Setting: 120'
One (1) 12-stage 8M vertical water lubricated turbine bowl assembly complete with:

A. Two (2) 5' x 5" column sections.
B. Eleven (11) 10' x 5" column sections.
C. Two (2) 5' x 1" line shaft sections with stainless steel sleeves and bearings.
D. Eleven (11) 10' x 1" line shaft sections with stainless steel sleeves and bearings.
E. One (1) 12" x 6" "D" surface discharge head with foundation plate and two-piece top shaft.
F. One (1) 25 HP, 3-60-240 volt, 1800 RPM VHS motor with NRC.
G. 120' of ¼" air line water level gauge, air line bracket and hand pump.

Your cost for well pump No. 3 is . . . . . .$6,903.00.

Prices include freight and start-up services but do not include any taxes. Terms are net 30 days. Our proposal is made subject to acceptance of an order by our credit department.

If you have any questions regarding our proposal, please give us a call.

Very truly yours,

ENVIRONMENTAL PRODUCTS

R M Wilkinson

R.M. Wilkinson

RMW:tb

cc: Dan Marlowe

INVOICE
80-7

CAROLINA WELL & PUMP COMPANY, INC.

COMPLETE WELL & PUMP SERVICE

P. O. BOX 1085 SANFORD, N. C. 27330 PHONE 919-776-3415

December 6, 1979

Town of Aberdeen
P. O. Box 578
Aberdeen, North Carolina 28315

Contract 14,281

Item A - Test well # 8		$ 7,200.00
Item B - Well # 8 construction		
(1) 30 LF 18 inch outer casing	@$70./ft.	2,100.00
(2) 150 feet inside casing	@ 40./ft.	6,000.00
(3) 50 LF of 10 inch stainless steel screen	@110./ft.	5,500.00
(4) 12 CY gravel pack	@200./yd.	2,400.00
Item C - Test well # 9		7,200.00
Item E - Testing well # 3		2,500.00
Total		$ 32,900.00
LESS 10%		3290.00
		$ 29610.00

DEC 7 1979

SERVICE - OUR MOTTO

APPROVED FOR PAYMENT
WM. [illegible] ASSOC.
By: Hugh M Baker Date 12/7/79

CAROLINA WELL & PUMP CO

Item No.	Quantities		Description	Unit Price	Total Price
A.			No. 8 Test Well, electric log, analysis & report		$ 7.200.00
B.			No. 8 Well Construction, test, sterilization, analysis & report:		
1.	30	LF	18" Outer Casing & Grout	$ 70.	2.100.00
2.	150	LF	10" Inside Casing	40.	6.000.00
3.	50	LF	10" Stainless Steel Screen	110	5.500.00
4.	10	CY	Filter Gravel Packing	200.	2.000.00
C.			No. 9 Test Well, electric log, analysis & report		7.200.00
D.			No. 9 Well Construction, test, sterilization, analysis & report:		
1.	30	LF	18" Outer Casing & Grout	$ 70.00	2.100.00
2.	150	LF	10" Inside Casing	40.00	6.000.00
3.	50	LF	10" Stainless Steel Screen	110.00	5.500.00
4.	10	CY	Filter Gravel Packing	300.00	6.000.00
E.			Existing Well No. 3 Yield & Drawdown Test, Analysis & Report		2.500.00
			TOTAL WELL CONTRACT		$ 52,100.00

$ 52.100.00

Respectfully submitted:

Edward Pfisterer
Signature

President
Title

Bidder - #21008
License Number

P.O. Box 1085
SANFORD
Address

June 19, 1979
July 3 1979
Date

Contractor - #21009

(SEAL—if BID is by a corporation)
Attest Virginia B. Lee

North Carolina Department of Environment, Health, and Natural Resources
Division of Environmental Health, Public Water Supply Section

SOURCE INFORMATION
GROUND WATER

Date Form Completed: 11/20/02

PWS: 03 63 020

Owner Assigned Source Code: W09

Well Name (If purchase, name of seller): WELL 9

Code: G (G=Ground, W=Purchase/G, Y=G w/direct influence, Z=W w/direct influence)

If purchase, seller ID#:

Source Begin Date (MM - YY):

Direct Influence Date (MM - DD - YY):

Availability: P (P=Permanent, E=Emergency, S=Seasonal, I=Interim, O=Other)

Location of well within the system (If purchase, location of master meter): SR 2063 & SR 2134

Latitude (N) Deg. Min Sec: 35-06-53.53

Longitude (W) Deg Min Sec: 79-24-45.91

How Determined: G (G=GPS, M=Map, S=Surveyed, D=Differential GPS)

GPS File Name: 090717A

If purchase, use seller's primary source lat/long)

Vulnerable VOC's: [ ] Y N

Assessment Date (MM - DD - YY):

ENTRY POINT INFORMATION

Owner Assigned Entry Point Code: E09

Entry Point Name: WELL 9

Use Code: C (C=Ground/Permanent, D=Ground/non-Permanent)

Availability: P (P=Year-round, S=Seasonal, E=Emergency, I=Interim, O=Other)

Entry Point Begin Date (MM / YY):

Entry Point End Date (MM / YY):

Location: WELL 9

Well Site: Owned or controlled? Y (Y,N) Control Area (100' radius?) Y (Y,N) If no, explain:

Sources of pollution/distance:

Surface water within 200'? N (Y,N) If yes, actual distance: If yes, bact. samples collected? (Y/N)

Adequate slope? Y (Y,N) Flooding? N (Y,N) Maintenance: GOOD

Well House: Free of stored materials? Y (Y,N) Properly drained? Y (Y,N) Locked? Y (Y,N)

Condition of house: GOOD Type of freeze protection: HEAT

Well: Diameter: 10" Type: DRILLED Yield (gpm): Properly sealed? Y (Y,N)

Properly vented? Y (Y,N) Casing Depth: 200 ft (If unknown, put 'UNK') Well depth: 200 Meter available? Y (Y,N)

Concrete slab adequate? Y (Y,N) If no, explain: Size: 3'

Size of blow-off: 3" Sample tap?: Before treatment? Y (Y,N) After Treatment? Y (Y,N)

Pumps: Capacity: GPM: 100 HP: 7 1/2 Pump intake depth: Auxiliary Power? (Y,N)

Type pump: SUBMERSIBLE Height above floor (pump/casing): / 6"

Storage at well site Elev: Hydro: Ground:

If hydro, air volume control? (Y,N) Safety valves: (Y,N) Coded? (Y,N)

High service pumps: 1. gpm hp 2. gpm hp 3. gpm hp Auxiliary power? (Y,N)

Is water treated? Y (Y,N) If yes, complete back of form.

If other wells are treated here, which ones? If treated elsewhere, where?

If purchase, retreat? (Y/N) If yes, complete back of form.

PLANT INFORMATION

Function Code [H] H=Well Head M=Pumping Fac. R=Storage Fac. T=Treatment Plt O=Other Plt./ Fac.

Plant Type [G] G=Ground Y=G w/direct influence

PWSS Assigned Code: P09

Plant Name: WELL 9

Availability [P] P= Permanent E=Emergency S=Seasonal I=Interim Source O=Other

Use Treatment Code Worksheet for assistance and if more space is needed. All 5 boxes must be filled in for treatment.

DISINFECTION

Treatment Code [D 4 210] Gas Post 4010 Pre 4030 Hypo Post 4210 Pre 4230 Chlorinator Make: CHEM TECH

Conditior GOOD Capacity: 30 GPD In Service? Y (Y,N) Spare Parts? Y (Y,N)

Proper Vent.? ___ (Y,N) Gas Mask? ___ (Y,N) SCBA? ___ (Y,N) Scales? ___ (Y,N) Autoswitch? ___ (Y,N) Alarms? ___ (Y,N)

Other type of disinfection:

IRON/MANGANESE TREATMENT REMOVAL

(F/M)

Polyphosphate [6800] [6800] Type:

Pump Make: Capacity: Condition: In service? ___ (Y,N)

Oxidant Code [F] [M] If pumped, make:

Capacity: Condition: In service? ___ (Y,N)

Filter(s):No. of: Size: Code [F] [M] 4600 Ion Exc. 3430 Greensand Head Loss Gauges? ___ (Y,N)

Media: Controls: ___ M=Manual F=Flow Meter C=Time Clock In service? ___ (Y,N)

Backwash Treatment: Disposal:

pH ADJUSTMENT

Chemical Used: SODA ASH Code [7 403] 7401 Caustic 7402 Lime 7403 Soda Ash

Pump Make: ALL DOS Capacity: 171 GPD Condition: GOOD In service? Y (Y,N)

CORROSION CONTROL (OTHER THAN pH)

Chemical Used: Code [C 4]

Pump Make: Capacity: Condition: In service? ___ (Y,N)

SOFTENING (ION EXCHANGE [S 4600]) ___ (Y,N)

Filter(s):No. of: Size: Condition:

Controls: ___ M=Manual F=Flow Meter C=Time Clock In service? ___ (Y,N) Disposal:

Head Loss Gauges? ___ (Y,N)

OTHER TREATMENT

Code [3801] Description: SODIUM FLUORIDE

Code [ ] Description:

COMMENTS:

INVOICE

ENVIRONMENTAL PRODUCTS INC.

A DIVISION OF DRILLER SERVICE, INC.

POST OFFICE BOX 2385 HICKORY, NORTH CAROLINA 28601 (704) 322-7003

IMPORTANT:
TO ASSURE PROPER CREDIT TO YOUR ACCOUNT, PLEASE REFER TO THIS NUMBER WHEN REMITTING.

INVOICE NUMBER 07137

Blue Contracting
P. O. Box 1090
Sanford, NC 27330

ACCOUNT NUMBER

TAX EXEMPT NUMBER 0087522

PLEASE MAIL REMITTANCE TO
ENVIRONMENTAL PRODUCT
POST OFFICE BOX 2385
HICKORY, N. C. 28601

TOWN OF ABERDEEN - Well #9

INVOICE DATE 7/25/80

PAGE

PPED	SHIPPED FROM	SHIPPED VIA	YOUR ORDER NUMBER	OUR ORDER NUMBER	SALES
17/80	HKY	Customer	Coker Blue	9969	

ANTITY SHIPPED	DESCRIPTION	UNIT PRICE	UNIT NET	NET AM
1	One Fairbanks Morse 13 stage, 6X5, 7000, water lubricated, vertical turbine pump, 100 GPM @ 220' TDH, 1740 RPM, for 5" column, 1" shafting, with 18.00 stick up (1-12 x 1-14 coupling)			
1	16½" x 6" "D" head, WL, 1" with foundation plate			
1	One topshaft, (Headshaft) 5'0" with sleeve			
1	One motor stub shaft, 1" Ø (CD 18 7/8") 24.125" with coupling			
1	One 6" x 5" Column bushing (fitted under head)			
1	One 5' section of 1" WL shaft assembly for 5" pipe (bottom)			
13	Thirteen 10' sections of 1" WL shaft assemblies for 5" pipe			
2	Two 5' sections of 5" column with couplings			
13	Thirteen 10' sections of 5" column with couplings			
1	One Johnson 5" SS Strainer			
1	One GE 10HP, 1800 3/60/230/460, VHS motor, with NRC, WP-1			5700.0

OT SHIPPED, BUT SHOWN AS ORDERED, ARE BACK ORDERED, UNLESS ORDER IS MARKED "COMPLETE."

illing months end with the billing of all purchases made through the 25th of each month.
on which cash discounts are allowable may be discounted, if paid by the **first** 10th of the month
g month ends; e. g. 26th through 25th.
es are due by the 25th of the month following month of purchase and, if payment is not received
½% INTEREST AND SERVICE CHARGE will be added monthly to past due
s charge is equivalent to an interest rate of **18% PER ANNUM.** Customer agrees that
esponsible for reasonable Attorney's fees and costs should they be incurred to collect this Invoice
grees that the situs of this contract is Hickory, North Carolina.

TAX ACCOUNT NUMBER

NC

TOTAL MATERIAL	5700.0
TOTAL LABOR	
TRANSPORTATION	
4.00 % SALES TAX	228.(
TOTAL INVOICE	5928.(

OUNT ALLOWED ON YOU PAY IF PAID BY INSTEAD OF TOTAL INVOICE.

proposal

115 0382

BILL'S WELL DRILLING COMPANY, INC.
800 McArthur Rd.
FAYETTEVILLE, N.C. 28311
(910) 488-3740 Fax (910) 488-3687

1-877-905-2853

TO: Mr. Rickie Monroe
Public Works Director
Town Of Aberdeen
P. O. Box 785
Aberdeen, N. C. 28315

PHONE	DATE
910-944-7012	12/6/2005
JOB NAME / LOCATION: Well #9	
JOB NUMBER	JOB PHONE

We hereby submit specifications and estimates for:

>

One (1) 10 HP Grundfos stainless steel submersible pump
Model #85S100-7

to include: 84 ft of new 3" galv pipe with 150 ft of new 8-3 submersible pump cable

Labor to pull existing pump from well and install new submersible pump back in well

Lump Sum Price $4898.00

Additional cost for new 10 HP magnetic starter IF NEEDED. $425.00

Freight & sales tax included in price.

Quality and quantity of the water is not guaranteed. Minimum depth charge on any well is 50 ft.

We Propose hereby to furnish material and labor — complete in accordance with the above specifications, for the sum of:
Four Thousand Eight Hundred Ninety Eight and 00/100 Dollars dollars ($ 4,898.00).

Payment to be made as follows:
Net 30 days after completion. If accepted, please sign and return blue copy of proposal to our office with purchase order number.

All material is guaranteed to be as specified. All work to be completed in a professional manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado, and other necessary insurance. Our workers are fully covered by Worker's Compensation insurance.

Authorized Signature Thomas W. Bill

Note: This proposal may be withdrawn by us if not accepted within 60 days.

Acceptance of Proposal — The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Signature _____

Signature _____

Date of Acceptance: _____

Upon customer failure to pay account, customer agrees to pay reasonable legal expense in any collection action.

PRODUCT 13128M USE WITH 771 ENVELOPE NEBS To Reorder: 1-800-225-6380 or www.nebs.com PRINTED IN U.S.A. B

PUMPING TEST DATA

Test conducted by: CAROLINA WELL & PUMP CO., INC. Ronald Patterson
Well Owner: Town of Aberdeen Address:
Pumped Well No: 10A Location: 15-501 County: Moore
Observation Well Locations: None
Airline Lengths: Pumped Well Observation Wells
Remarks:

Pumping Rate Measured With: 4 x 3 orifice Water Levels Measured With: Electric tape

PUMP WELL DATA

Date and Time 9-10-86	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
Static	Water						
12:30						70'8"	
		Started pumping					
12:35	5	8	122			94'	
12:40	10	8	122			94'10"	
12:45	15	8	122			95'3"	
12:50	20	8	122			95'10"	
12:55	25	8	122			95'10"	
1:00	30	8	122			95'10"	
1:05	35	8	122			95'10"	
1:10	40	8	122			95'10"	
1:15	45	8	122			95'10"	
1:20	50	8	122			95'10"	
1:25	55	8	122			95'10"	
1:30	60	8	122			95'10"	
1:35	65	8	122			96'10"	
1:40	70	8	122			96'2"	
1:45	75	8	122			96'	
1:50	80	8	122			96'	
1:55	85	8	122			96'$\frac{1}{2}$"	
2:00	90	8	122			96'$\frac{1}{2}$"	
2:05	95	8	122			96'$\frac{1}{2}$"	
2:10	100	8	122			96'$\frac{1}{2}$"	
2:15	105	8	122			96'1"	
2:20	110	8	122			96'1$\frac{1}{2}$"	
2:25	115	8	122			96'2"	
2:30	120	8	122			96'2"	
2:40	130	8	122			96'1$\frac{1}{2}$"	
2:50	140	8	122			96'1$\frac{1}{2}$"	
3:00	150	8	122			96'1$\frac{1}{2}$"	
3:10	160	8	122			96'2"	
3:20	170	8	122			96'1$\frac{1}{2}$"	
3:30	180	8	122			96'1$\frac{1}{2}$"	
3:45	195	8	122			96'2"	
4:00	210	8	122			96'2"	
4:15	225	8	122			96'1$\frac{1}{2}$"	
4:30	240	8	122			96'1$\frac{1}{2}$"	
5:00	270	8	122			96'1$\frac{1}{2}$"	
5:30	300	8	122			96'1$\frac{1}{2}$"	
6:30	360	8	122			96'3"	
7:30	420	8	122			96'4"	
8:30	480	8	122			96'5"	
9:30	540	8	122			96'7$\frac{1}{2}$"	
10:30	600	8	122			96'9$\frac{1}{2}$"	
11:30	660	13	151			107'$\frac{1}{2}$"	
12:30	720	13	151			107'6"	

Form No. 16824A

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, N.C. 27611, PHONE (919) 733-5083

RECEIVED PWSB FEB 10 1988 PLAN REVIEW UNIT

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc ____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR Bill's Well Drilling Co
DRILLER REGISTRATION NUMBER 106
STATE WELL CONSTRUCTION PERMIT NUMBER: 62-0098-WS-0090

1. WELL LOCATION: (Show sketch of the location below)
Nearest Town: Aberdeen, N.C.
County: Moore
HWY 211 well #12
(Road, Community, or Subdivision and Lot No.)

2. OWNER Town of Aberdeen
ADDRESS P. O. Box 785 (Street or Route No.)
Aberdeen, (City or Town) NC (State) 28315 (Zip Code)

3. DATE DRILLED 9-3-87 USE OF WELL public
4. TOTAL DEPTH 191 CUTTINGS COLLECTED ☒ Yes ☐ No
5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No
6. STATIC WATER LEVEL 62 FT. ☐ above ☒ below TOP OF CASING,
TOP OF CASING IS 2 FT. ABOVE LAND SURFACE.
7. YIELD (gpm) 260 METHOD OF TEST pumping
8. WATER ZONES (depth) 129 - 179 ft.
9. CHLORINATION Type HTH Amount 2 lbs.

DRILLING LOG

Depth From	Depth To	Formation Description
0	1	Topsoil
1	20	Orange sand & clay
20	30	White clay & sand
30	55	Coarse white sand & gravel
55	76	White, gray sand & clay
76	88	Tight sand & clay
88	97	Yellow sand
97	102	Yellow sand & clay
102	110	Yellow sand
110	130	Yellow sand & clay
130	169	Coarse yellow sand
169	183	Fine yellow sand
183	200	White & red clay

If additional space is needed use back of form.

10. CASING

	Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
From	0	To 40 Ft.	20"	s/w	steel
From	+2	To 129 Ft.	10"	s/w	steel
From	179	To 189 Ft.	10"	s/w	steel

11. GROUT:

	Depth From	To	Material	Method
From	0	To 40 Ft.	cement	pumping
From		To Ft.		

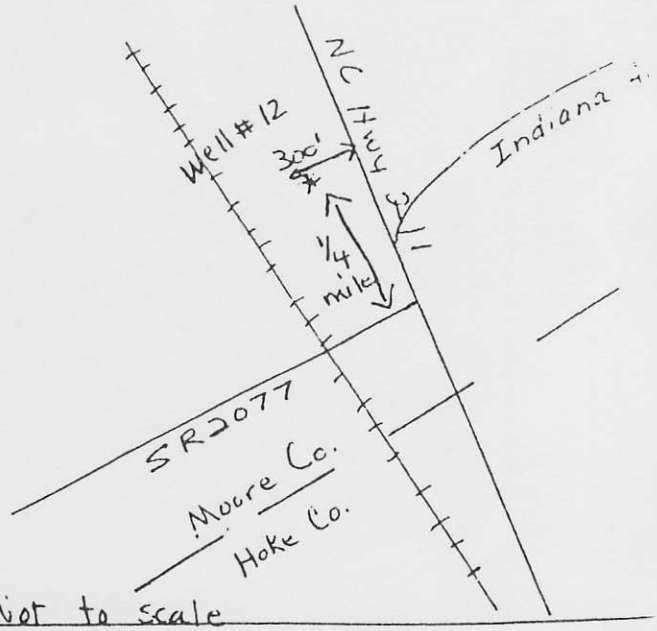
12. SCREEN:

	Depth From	To	Diameter	Slot Size	Material
From	129	To 179 Ft.	10" in.	30 in.	SS
From		To Ft.	in.	in.	
From		To Ft.	in.	in.	

13. GRAVEL PACK:

	Depth From	To	Size	Material
From	0	To 189 Ft.	filter sand	gravel
From		To Ft.		

LOCATION SKETCH
(Show direction and distance from at least two State Roads or other map reference points)



14. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Thomas W. Bill (Blk) 9-22-87
SIGNATURE OF CONTRACTOR OR AGENT DATE

Submit original to Division of Environmental Management and copy to well owner

DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.C BOX 27687 - RALEIGH,N.C. 27611, PHONE (919) 733-5083

RECEIVED
PWSS
FEB 10 1988
PLAN REVIEW UNIT

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

LLING CONTRACTOR Bill's Well Drilling Co.

ILLER REGISTRATION NUMBER 106

STATE WELL CONSTRUCTION PERMIT NUMBER: 62-0098-WS-0089

ELL LOCATION: (Show sketch of the location below)

earest Town: Aberdeen, N. C.
off SR 2077 well #13
load, Community, or Subdivision and Lot No.)

County: Moore

WNER Town of Aberdeen

DDRESS P. O. Box 785
(Street or Route No.)
Aberdeen, NC 28315
City or Town State Zip Code

ATE DRILLED 9-7-87 USE OF WELL public

OTAL DEPTH 188 ft. CUTTINGS COLLECTED ☒ Yes ☐ No

OES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

TATIC WATER LEVEL 64 FT. ☐ above ☒ below TOP OF CASING,
TOP OF CASING IS 2 FT. ABOVE LAND SURFACE

ELD (gpm) 210 METHOD OF TEST pumping

ATER ZONES (depth) 126 - 176 ft.

HLORINATION Type HTH Amount 2 lbs.

ASING

Depth		Diameter	Wall Thickness or Weight/Ft.	Material
From 0 To 40 Ft.		20"	s/w	steel
From +2 To 126 Ft.		10"	s/w	steel
From 176 To 186 Ft.		10"	s/w	steel

GROUT

Depth		Material	Method
From 0 To 40 Ft.		cement	pumping
From _____ To _____ Ft.			

SCREEN

Depth		Diameter	Slot Size	Material
From 126 To 176 Ft.		10" in.	30 in.	SS
From _____ To _____ Ft.		_____ in.	_____ in.	
From _____ To _____ Ft.		_____ in.	_____ in.	

GRAVEL PACK:

Depth		Size	Material
From 0 To 186 Ft.		filter sand	gravel
From _____ To _____ Ft.			

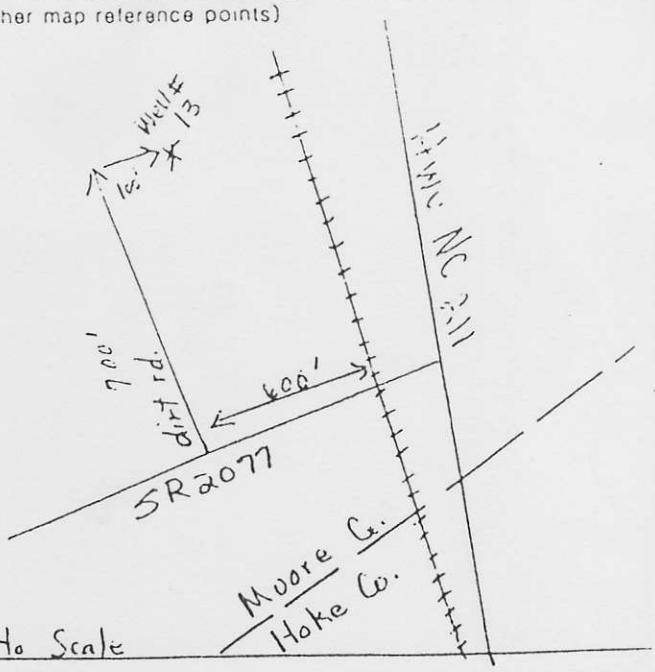
REMARKS

Depth From	Depth To	DRILLING LOG Formation Description
0	1	Topsoil
1	31	Sand
31	39	Orange sand & clay
39	46	White sand
46	54	Clay
54	81	White sand
81	85	Clay
85	99	White sand
99	111	Clay
111	117	Sand
117	123	Clay
123	172	Coarse sand
172	186	Sand with streaks of clay
186	200	White clay

If additional space is needed use back of form.

LOCATION SKETCH

(Show direction and distance from at least two State Roads or other map reference points)



Not to Scale

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Thomas W. Bill Jr. 9-22-87
SIGNATURE OF CONTRACTOR OR AGENT DATE

1 Revised 11/84

Submit original to Division of Environmental Management and copy to well owner

DIVISION OF ENVIRONMENTAL MANAGEMENT – GROUNDWATER SECTION
P.O. BOX 27687 – RALEIGH, N.C. 27611, PHONE (919) 733-5083

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc _____
Minor Basin _____
Basin Code _____
Header Ent.. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR Carolina Well & Pump Inc.
DRILLER REGISTRATION NUMBER 136
STATE WELL CONSTRUCTION PERMIT NUMBER: 62-0098-WS-0168

#14

1. WELL LOCATION: (Show sketch of the location below)
Nearest Town: Aberdeen
County: Moore
(Road, Community, or Subdivision and Lot No.)

2. OWNER Aberdeen
ADDRESS P.O. Box 785 (Street or Route No.)
Aberdeen (City or Town) N.C. (State) 28315 (Zip Code)

3. DATE DRILLED 1-20-95 USE OF WELL City
4. TOTAL DEPTH 187 CUTTINGS COLLECTED ☑ Yes ☐ No
5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☑ No
6. STATIC WATER LEVEL: 98'3½" FT. ☐ above ☑ below TOP OF CASING.
TOP OF CASING IS 2 FT. ABOVE LAND SURFACE.
7. YIELD (gpm): 104 METHOD OF TEST Pumped
8. WATER ZONES (depth): 130 - 180
9. CHLORINATION: Type HTH Amount 10 lbs
10. CASING:

	Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
	+1	60 Ft.	19¼	42 lbs	Steel
	+2	130 Ft.	8"	29 lbs	Steel

11. GROUT:

	Depth From	To	Material	Method
	0	60 Ft.	Cement	Pumped
		Ft.		

12. SCREEN:

	Depth From	To	Diameter	Slot Size	Material
	130	180 Ft.	8 in.	30 slot in.	stainless
		Ft.	in.	in.	
		Ft.	in.	in.	

13. GRAVEL PACK:

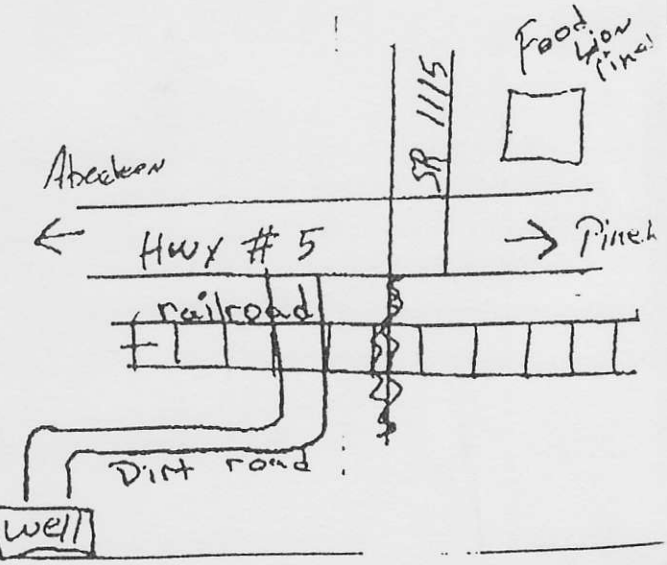
	Depth From	To	Size	Material
	0	180 Ft.	3/16 X 10	Coarse sand
		Ft.		

14. REMARKS: Good Water

Depth From	To	DRILLING LOG Formation Description
0	1	Top soil
1	10	Sandy Clay
11	15	Sand
15	34	clay
36	47	Sand
47	55	clay
55	61	Sand
61	70	Clay
70	75	Sand
75	93	Clay
93	104	Sand
104	121	Clay
121	177	Sand
177	210	soft sandy clay

If additional space is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Road or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

WORTH F. PICKARD 9-1-95
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 11/84
Submit original to Division of Environmental Management and copy to well owner

NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2111

1. WELL CONTRACTOR:

Thomas Bill
Well Contractor (Individual) Name

Bill's Well Drilling Co. Inc.
Well Contractor Company Name

STREET ADDRESS 800 McArthur Rd

Fayetteville, NC 28311
City or Town State Zip Code

(910) 488-3740
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable)

STATE WELL PERMIT#(if applicable) WS06-00991

DWQ or OTHER PERMIT #(if applicable)

WELL USE (Check Applicable Box) Monitoring ☐ Municipal/Public ☒

Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐

Irrigation ☐ Other ☐ (list use)

DATE DRILLED 1-20-06

TIME COMPLETED 5:00 AM ☒ PM ☒

3. WELL LOCATION:

CITY Aberdeen COUNTY Moore

Well #19 Guybo Street
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:

☒ Slope ☒ Valley ☐ Flat ☐ Ridge ☐ Other
(check appropriate box)

LATITUDE 3 ___ ___

LONGITUDE ___ ___ ___

May be in degrees, minutes, seconds or in a decimal format

Latitude/longitude source: ☐ GPS ☒ Topographic map

(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

4. FACILITY - is the name of the business where the well is located

FACILITY ID #(if applicable)

NAME OF FACILITY Town of Aberdeen Public Works

STREET ADDRESS 121Pumell Cr

Aberdeen, NC 28315
City or Town State Zip Code

CONTACT PERSON Ricky Monroe

MAILING ADDRESS PO Box 785

Aberdeen, NC 28315
City or Town State Zip Code

(910) 944-7012
Area code - Phone number

5. WELL DETAILS:

a. TOTAL DEPTH: 92

b. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒

c. WATER LEVEL Below Top of Casing: 27 FT.
(Use "+" if Above Top of Casing)

d. TOP OF CASING IS 2 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. YIELD (gpm): 90 METHOD OF TEST Pumping

f. DISINFECTION: Type HTH Amount 5 lbs

g. WATER ZONES (depth):

From 67 To 82 From ___ To ___
From ___ To ___ From ___ To ___
From ___ To ___ From ___ To ___

6. CASING:

	Depth		Diameter	Thickness/ Weight	Material
From +1	To 63	Ft.	20"	sch40	steel
From +2	To 67	Ft.	10"	sch10	S. S.
From ___	To ___	Ft.			

7. GROUT:

	Depth		Material	Method
From 0	To 63	Ft.	cement	pumped
From ___	To ___	Ft.		
From ___	To ___	Ft.		

8. SCREEN:

	Depth		Diameter		Slot Size		Material
From 67	To 82	Ft.	10	in.	030	in.	S. S.
From ___	To ___	Ft.	___	in.	___	in.	
From ___	To ___	Ft.	___	in.	___	in.	

9. SAND/GRAVEL PACK:

	Depth		Size	Material
From 0	To 90	Ft.	#4	Gravel
From ___	To ___	Ft.		
From ___	To ___	Ft.		

10. DRILLING LOG

From	To	Formation Description
0	28	Orange Sand & Clay
28	36	Gray Sand & Clay
36	40	Yellow Sand
40	41	Gray Clay
41	57	Sand
57	59	Gray clay
59	70	Sand
70	95	Pea Gravel Mixed With Clay

11. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Thomas W. Bill 2/15/06
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Thomas W. Bill
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev. 7/05

//

North Carolina - Department of Environment and Natural Resources - Division of Water Quality - Groundwater Section
1636 Mail Service Center - Raleigh, N.C. 27699-1636-Phone (919) 733-3221

WELL CONSTRUCTION RECORD

WELL CONTRACTOR: Carolina Well & Pump
WELL CONTRACTOR CERTIFICATION #:
STATE WELL CONSTRUCTION PERMIT#: 136

1. WELL USE (Check Applicable Box): Residential ☐ Municipal ☒ Industrial ☐ Agricultural ☐ Monitoring ☐
   Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use:
2. WELL LOCATION: (Show sketch of the location below) Well 11
   Nearest Town: Aberdeen County: Moore
   US 15-501
   (Road Name and Numbers, Community, or Subdivision and Lot No.)
3. OWNER Town of Aberdeen
   Address 115 N. Poplar Street
   (Street or Route No.)
   Aberdeen, N. C. 28315
   City or Town State Zip Code
4. DATE DRILLED
5. TOTAL DEPTH 200
6. CUTTINGS COLLECTED YES ☒ NO ☐
7. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
8. STATIC WATER LEVEL Below Top of Casing: 67.8 FT.
   (Use "+" if Above Top of Casing)
9. TOP OF CASING IS 2 FT. Above Land Surface*
   *Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C .0118
10. YIELD (gpm): 151 METHOD OF TEST Pump
11. WATER ZONES (depth): 126-185
12. CHLORINATION: Type 3 lbs. Amount
13. CASING:

From	To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
0	68		20	3/8	Steel
+2	124		8	#40	Steel
168	180		8	#40	Steel

14. GROUT:

From	To	Ft.	Material	Method
0	68		Cement	Pump

15. SCREEN:

From	To	Ft.	Diameter		Slot Size		Material
126	168		8	in.	40	in.	S. Steel
180	190		8	in.	40	in.	S. Steel
				in.		in.	

16. SAND/GRAVEL PACK:

From	To	Ft.	Size	Material
0	200		Pea Gravel	

17. REMARKS:

DRILLING LOG

From	To	DEPTH Formation Description
Top Soil		0-2
Sandy Clay		7-11
Fine Sand		11-64
Clay		64-80
Clay-Sand		80-124
Good Sand		124-168
Sand-Clay		168-190
Clay		190-220

If additional space is needed use back of form

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF PERSON CONSTRUCTING THE WELL DATE

Submit original to Division of Water Quality, Groundwater Section within 30 days

FOR OFFICE USE ONLY
Quad No:
Serial No.

GW-1 REV. 12/99

North Carolina - Department of Environment and Natural Resources - Division of Water Quality - Groundwater Section
1636 Mail Service Center - Raleigh, N.C. 27699-1636-Phone (919) 733-3221

WELL CONSTRUCTION RECORD

WELL CONTRACTOR: Carolina Well & Pump
WELL CONTRACTOR CERTIFICATION #:
STATE WELL CONSTRUCTION PERMIT#: 136

1. WELL USE (Check Applicable Box): Residential ☐ Municipal ☒ Industrial ☐ Agricultural ☐ Monitoring ☐
Recovery ☐ Heat Pump Water Injection ☐ Other ☐ If Other, List Use:

2. WELL LOCATION: (Show sketch of the location below)
Nearest Town: Aberdeen County: Moore
US 15-501 Well 11
(Road Name and Numbers, Community, or Subdivision and Lot No.)

3. OWNER Town of Aberdeen
Address 115 N. Poplar Street
(Street or Route No.)
Aberdeen, N. C. 28315
City or Town State Zip Code

4. DATE DRILLED
5. TOTAL DEPTH 200
6. CUTTINGS COLLECTED YES ☒ NO ☐
7. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
8. STATIC WATER LEVEL Below Top of Casing: 67.8 FT.
(Use "+" if Above Top of Casing)
9. TOP OF CASING IS 2 FT. Above Land Surface*
*Top of casing terminated at/or below land surface requires a variance in accordance with 15A NCAC 2C .0118
10. YIELD (gpm): 151 METHOD OF TEST Pump
11. WATER ZONES (depth): 126-185
12. CHLORINATION: Type 3 lbs. Amount
13. CASING:

	Depth		Diameter	Wall Thickness or Weight/Ft.	Material
From 0	To 68	Ft.	20	3/8	Steel
From +2	To 124	Ft.	8	#40	Steel
From 168	To 180	Ft.	8	#40	Steel

14. GROUT:

	Depth		Material	Method
From	To	Ft.		
From 0	To 68	Ft.	Cement	Pump

15. SCREEN:

	Depth		Diameter		Slot Size		Material
From 126	To 168	Ft	8	in.	40	in.	S. Steel
From 180	To 190	Ft.	8	in.	40	in.	S. Steel
From	To	Ft.		in.		in.	

16. SAND/GRAVEL PACK:

	Depth		Size	Material
From 0	To 200	Ft.	Pea Gravel	
From	To	Ft.		

17. REMARKS:

DRILLING LOG From	To	DEPTH Formation Description
Top Soil		0-2
Sandy Clay		7-11
Fine Sand		11-64
Clay		64-80
Clay-Sand		80-124
Good Sand		124-168
Sand-Clay		168-190
Clay		190-220

If additional space is needed use back of form

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

SIGNATURE OF PERSON CONSTRUCTING THE WELL DATE

Submit original to Division of Water Quality, Groundwater Section within 30 days

GW-1 REV. 12/99

FOR OFFICE USE ONLY
Quad No:
Serial No.

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Inc. (Ronald Patterson)
Well Owner: Aberdeen Address:
Pumped Well No: 11 Location: off 15-501 County: Moore
Observation Well Locations:
Airline Lengths: Pumped Well Observation Wells
Remarks:

Pumping Rate Measured With: orifice Water Levels Measured With: Electric Tape

12 Hrs Test
2 Hrs Recovery 3 X 4 orifice

PUMP WELL DATA

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
		STATIC	WATER	LEVEL		67'8"	
12:00		STARTED	PUMPING	TEST			
12:05	5	13	151			99'10"	
12:10	10	13	151			102'2"	
12:15	15	13	151			103'2"	
12:20	20	13	151			103'6½"	
12:25	25	13	151			103'10½"	
12:30	30	13	151			104'1"	
12:35	35	13	151			104'5"	
12:40	40	13	151			105'1½"	
12:45	45	13	151			105'	
12:50	50	13	151			105'5"	
12:55	55	13	151			105'5"	
1:00	60	13	151			105'5"	
1:05	65	13	151			105'11"	
1:10	70	13	151			105'11½"	
1:15	75	13	151			105'11½"	
1:20	80	13	151			105'11¼"	
1:25	85	13	151			106'½"	
1:30	90	13	151			106'½"	
1:35	95	13	151			106'½"	
1:40	100	13	151			106'½"	
1:45	105	13	151			106'½"	
1:50	110	13	151			106'½"	
1:55	115	13	151			106'½"	
2:00	120	13	151			106'½"	
2:10	130	13	151			106'1½"	
2:20	140	13	151			106'1½"	
2:30	150	13	151			106'1½"	
2:40	160	13	151			106'1½"	
2:50	170	13	151			106'1"	
3:00	180	13	151			105'11"	
3:15	195	13	151			105'11"	
3:30	210	13	151			105'11"	
3:45	225	13	151			106'4"	
4:00	240	13	151			106'1½"	
4:30	270	13	151			105'11½"	
5:00	300	13	151			106'	
6:00	360	13	151			106'½"	
7:00	420	13	151			106'2½"	
8:00	480	13	151			106'2½	
9:00	540	13	151			106'2½"	
10:00	600	13	151			106'2½"	
11:00	660	13	151			106'2½	
12:00	720	13	151			106'2½"	

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH,N.C. 27611, PHONE (919) 733-5083

RECEIVED FEB 10 1988 PWSB PLAN REVIEW UNIT

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc ____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR Bill's Well Drilling Co

DRILLER REGISTRATION NUMBER 106

STATE WELL CONSTRUCTION PERMIT NUMBER: 62-0098-WS-0090

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Aberdeen, N.C.
HWY 211 well #12
(Road, Community, or Subdivision and Lot No.)

County: Moore

2. OWNER Town of Aberdeen
ADDRESS P. O. Box 785 (Street or Route No.)
Aberdeen, (City or Town) NC (State) 28315 (Zip Code)

3. DATE DRILLED 9-3-87 USE OF WELL public

4. TOTAL DEPTH 191 CUTTINGS COLLECTED ☒ Yes ☐ No

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL: 62 FT. ☐ above ☒ below TOP OF CASING,
TOP OF CASING IS 2 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): 260 METHOD OF TEST pumping

8. WATER ZONES (depth): 129 - 179 ft.

9. CHLORINATION: Type HTH Amount 2 lbs.

10. CASING:

	Depth From	To		Diameter	Wall Thickness or Weight/Ft.	Material
From	0	To 40	Ft.	20"	s/w	steel
From	+2	To 129	Ft.	10"	s/w	steel
From	179	To 189	Ft.	10"	s/w	steel

11. GROUT:

	Depth From	To		Material	Method
From	0	To 40	Ft.	cement	pumping
From		To	Ft.		

12. SCREEN:

	Depth From	To		Diameter		Slot Size		Material
From	129	To 179	Ft.	10"	in.	30	in.	SS
From		To	Ft.		in.		in.	
From		To	Ft.		in.		in.	

13. GRAVEL PACK:

	Depth From	To		Size	Material
From	0	To 189	Ft.	filter sand	gravel
From		To	Ft.		

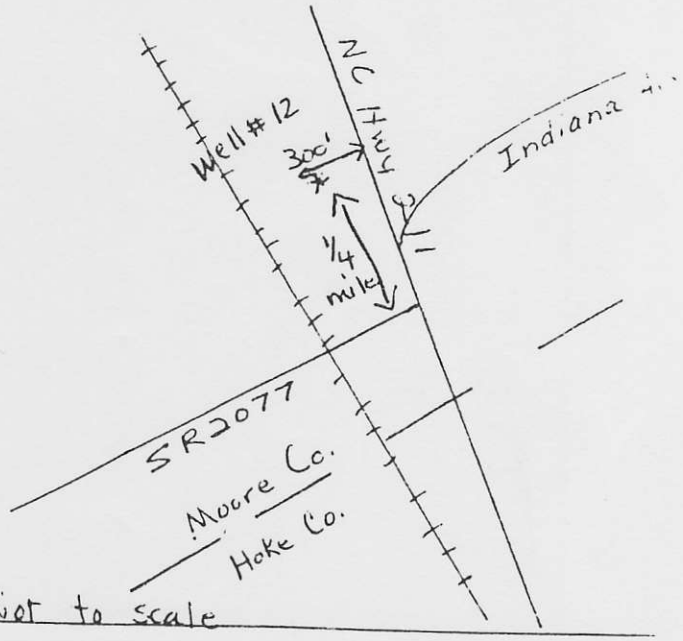
14. REMARKS: _____

DRILLING LOG

Depth From	To	Formation Description
0	1	Topsoil
1	20	Orange sand & clay
20	30	White clay & sand
30	55	Coarse white sand & gravel
55	76	White, gray sand & clay
76	88	Tight sand & clay
88	97	Yellow sand
97	102	Yellow sand & clay
102	110	Yellow sand
110	130	Yellow sand & clay
130	169	Coarse yellow sand
169	183	Fine yellow sand
183	200	White & red clay

If additional space is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Thomas W. Bill (Jr.) 9-22-87
SIGNATURE OF CONTRACTOR OR AGENT DATE

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, N.C. 27611, PHONE (919) 733-5083

RECEIVED PWSS FEB 10 1988 PLAN REVIEW UNIT

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR Bill's Well Drilling Co.
DRILLER REGISTRATION NUMBER 106
STATE WELL CONSTRUCTION PERMIT NUMBER: 62-0098-WS-0089

WELL LOCATION: (Show sketch of the location below)
Nearest Town: Aberdeen, N. C.
off SR 2077 (well #13)
(Road, Community, or Subdivision and Lot No.)
County: Moore

OWNER Town of Aberdeen
ADDRESS P. O. Box 785 (Street or Route No.)
Aberdeen, NC 28315 (City or Town / State / Zip Code)

DATE DRILLED 9-7-87 USE OF WELL public
TOTAL DEPTH 188 ft. CUTTINGS COLLECTED ☒ Yes ☐ No
DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No
STATIC WATER LEVEL: 64 FT. ☐ above ☒ below TOP OF CASING,
TOP OF CASING IS 2 FT. ABOVE LAND SURFACE
YIELD (gpm): 210 METHOD OF TEST pumping
WATER ZONES (depth): 126 - 176 ft.

CHLORINATION: Type HTH Amount 2 lbs.

CASING:

	Depth From	To	Diameter	Wall Thickness or Weight/Ft.	Material
From	0	To 40 Ft.	20"	s/w	steel
From	+2	To 126 Ft.	10"	s/w	steel
From	176	To 186 Ft.	10"	s/w	steel

GROUT:

	Depth From	To	Material	Method
From	0	To 40 Ft.	cement	pumping
From		To Ft.		

SCREEN:

	Depth From	To	Diameter	Slot Size	Material
From	126	To 176 Ft.	10" in.	30 in.	SS
From		To Ft.	in.	in.	
From		To Ft.	in.	in.	

GRAVEL PACK:

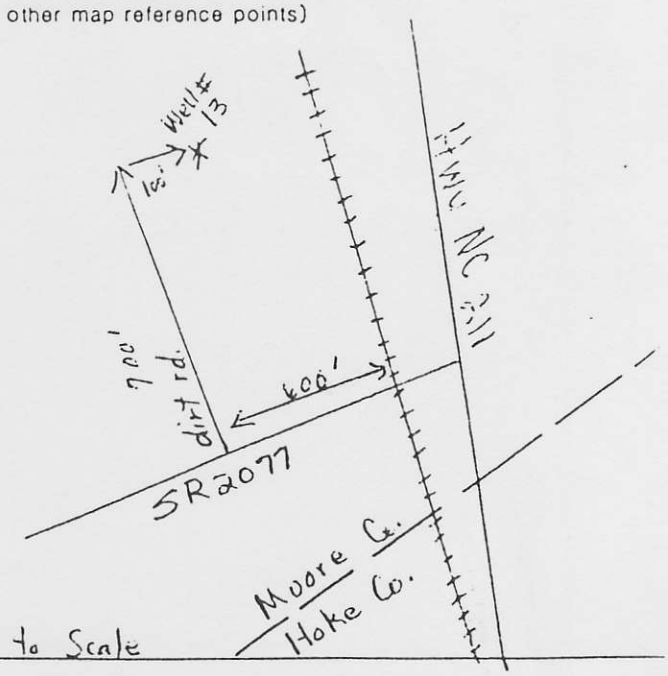
	Depth From	To	Size	Material
From	0	To 186 Ft.	filter sand	gravel
From		To Ft.		

REMARKS:

Depth From	To	DRILLING LOG Formation Description
0	1	Topsoil
1	31	Sand
31	39	Orange sand & clay
39	46	White sand
46	54	Clay
54	81	White sand
81	85	Clay
85	99	White sand
99	111	Clay
111	117	Sand
117	123	Clay
123	172	Coarse sand
172	186	Sand with streaks of clay
186	200	White clay

If additional space is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



Not to Scale

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Thomas W. Bill, Jr. 9-22-87
SIGNATURE OF CONTRACTOR OR AGENT DATE

1 Revised 11/84

Submit original to Division of Environmental Management and copy to well owner

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, N.C. 27611, PHONE (919) 733-5083

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc _____
Minor Basin _____
Basin Code _____
Header Ent.. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR Carolina Well & Pump Inc.
DRILLER REGISTRATION NUMBER 136
STATE WELL CONSTRUCTION PERMIT NUMBER: 62-0098-WS-0168
#14

1. WELL LOCATION: (Show sketch of the location below)
Nearest Town: Aberdeen
County: Moore
(Road, Community, or Subdivision and Lot No.)

2. OWNER Aberdeen
ADDRESS P.O. Box 785 (Street or Route No.)
Aberdeen (City or Town) N.C. (State) 28315 (Zip Code)

3. DATE DRILLED 1-20-95 USE OF WELL City
4. TOTAL DEPTH 187 CUTTINGS COLLECTED ☑ Yes ☐ No
5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☑ No
6. STATIC WATER LEVEL: 98'3½" FT. ☐ above ☑ below TOP OF CASING.
TOP OF CASING IS 2 FT. ABOVE LAND SURFACE.
7. YIELD (gpm): 104 METHOD OF TEST Pumped
8. WATER ZONES (depth): 130 - 180
9. CHLORINATION: Type HTH Amount 10 lbs
10. CASING:

	Depth		Diameter	Wall Thickness or Weight/Ft.	Material
From	[illegible]	To [illegible] Ft.			
From	+1	To 60 Ft.	19¼	42 lbs	steel
From	+2	To 130 Ft.	8"	29 lbs	steel

11. GROUT:

	Depth		Material	Method
From	0	To 60 Ft.	Cement	Pumped
From		To Ft.		

12. SCREEN:

	Depth		Diameter	Slot Size	Material
From	130	To 180 Ft.	8 in.	30 slot in.	stainless
From		To Ft.	in.	in.	
From		To Ft.	in.	in.	

13. GRAVEL PACK:

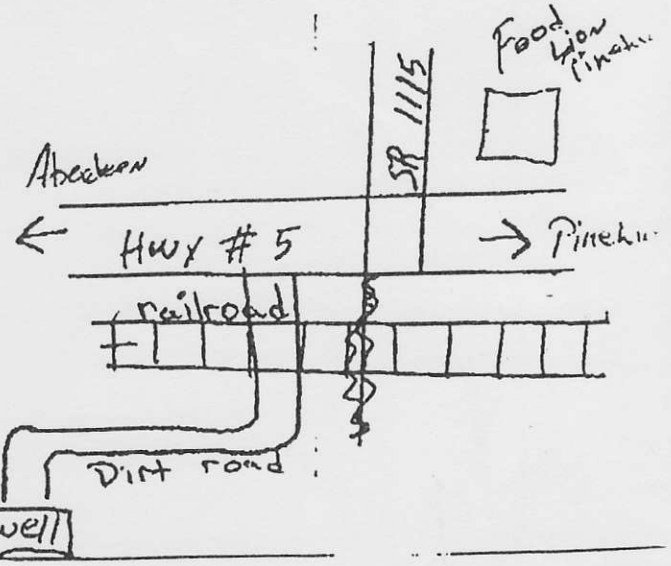
	Depth		Size	Material
From	0	To 180 Ft.	3/16 X 10	Coarse sand
From		To Ft.		

14. MARKS: Good Water

Depth From	Depth To	DRILLING LOG Formation Description
0	1	Top soil
1	10	Sandy Clay
11	15	Sand
15	34	clay
36	47	Sand
47	55	clay
55	61	Sand
61	70	Clay
70	75	Sand
75	93	Clay
93	104	Sand
104	121	Clay
121	177	Sand
177	218	soft sandy clay

If additional space is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

WORTH F. PICKARD — SIGNATURE OF CONTRACTOR OR AGENT
9-1-95 — DATE

Submit original to Division of Environmental Management and copy to well owner.

GW-1 Revised 11/84

CAROLINA
WELL&PUMP CO
INC

Test Well #15

Aberdeen, N. C.

Oct. 27, 1987

By: Ronald Patterson

0 - 10 Sand	100 - 110 Sand
10 - 20 Sand	110 - 120 Sand
20 - 30 Sand & clay	120 - 130 Sand
30 - 40 Sand & clay	130 - 140 Sand & clay
40 - 50 Sand	140 - 150 Clay
50 - 60 Sand	150 - 160 Clay
60 - 70 Sand	160 - 170 Clay
70 - 80 Sand, clay	170 - 180 Clay
80 - 90 Sand	180 - 190 Clay
90 - 100 Sand	190 - 200 Clay & rock

A CERTIFIED MEMBER OF NWWA AND NCGWA

SANFORD, NORTH CAROLINA 27330
P.O. BOX 1085

PUMPING TEST DATA

Test conducted by: CAROLINA WELL & PUMP COMPANY, INC. BY: HORACE BARBER
Well Owner: TOWN OF ABERDEEN Address:
Pumped Well No: 15 Location: OFF OF # 5 HIGHWAY County: MOORE
Observation Well Locations:
Airline Lengths: Pumped Well Observation Wells
Remarks:

Pumping Rate Measured With: METER Water Levels Measured With: ELECTRIC TAPE

PUMP WELL DATA

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
		STATIC	WATER	LEVEL		66'1"	
6/17/91							
11:00		STARTED	24 HOUR	PUMPING	TEST		
11:05	5		108			88'3"	
11:10	10		108			92'8"	
11:15	15		108			96'1"	
11:20	20		108			98'3"	
11:25	25		108			98'3'	
11:30	30		108			98'3"	
11:35	35		108			98'3'	
11:40	40		108			97'10"	
11:45	45		108			97'9½"	
11:50	50		108			97'8"	
11:55	55		108			97'5"	
12:00	60		108			97'7½"	
12:05	65		108			97'11½"	
12:10	70		108			98'	
12:15	75		108			98'	
12:20	80		108			97'3"	
12:25	85		108			97'	
12:30	90		108			98'3"	
12:35	95		108			98'3"	
12:40	100		108			98'5"	
12:45	105		108			98'5"	
12:50	110		108			98'5"	
12:55	115		108			98'5"	
1:00	120		108			98'7"	
1:10	130		108			98'5"	
1:20	140		108			98'8"	
1:30	150		108			98'8"	
1:40	160		108			98'8"	
1:50	170		108			98'8"	
2:00	180		108			98'8"	
2:15	195		108			98'8"	
2:30	210		108			98'8"	
2:45	225		108			98'10"	
3:00	240		108			98'11"	
3:30	270		108			99'3"	
4:00	300		108			99'3"	
5:00	360		108			99'4"	
6:00	420		108			99'6"	
7:00	480		108			99'6"	
8:00	540		108			99'6"	
9:00	600		108			99'6"	
10:00	660		108			99'10"	

Form No. 16824A

PUMPING TEST DATA

Test conducted by: Carolina Well & Pump Co., Inc. Ronald Patterson--Horace Barber
Well Owner: Town of Aberdeen Address:
Pumped Well No: 16 Location: At Tank County: Moore
Observation Well Locations:
Airline Lengths: Pumped Well Observation Wells
Remarks:

Pumping Rate Measured With: 3 x 4 orifice Water Levels Measured With: Airline

PUMP WELL DATA

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
8-15-94							
9:55		SWL				173'	
10:00		START PUMPING TEST					
10:05	5	17½"	175			192'	
10:10	10	"	"			197'	
10:15	15	"	"			198'	
10:20	20	"	"			202'	
10:25	25	"	"			204'	
10:30	30	"	"			205'	
10:35	35	"	"			206'	
10:40	40	"	"			206'	
10:45	45	"	"			207'	
10:50	50	"	"			207'	
10:55	55	"	"			208'	
11:00	60	"	"			208'	
11:05	65	"	"			208'	
11:10	70	"	"			208'	
11:15	75	"	"			208'	
11:20	80	"	"			208'	
11:25	85	"	"			208'	
11:30	90	"	"			209'	
11:35	95	"	"			209'	
11:40	100	"	"			209'	
11:45	105	"	"			209'	
11:50	110	"	"			210'	
11:55	115	"	"			210'	
12:00	120	"	"			210'	
12:10	130	"	"			211'	
12:20	140	"	"			211'	
12:30	150	"	"			211'	
12:40	160	"	"			211'	
12:50	170	"	"			212'	
1:00	180	"	"			212'	
1:15	195	"	"			212'	
1:30	210	"	"			212'	
1:45	225	"	"			212'	
2:00	240	"	"			213'	
2:30	270	"	"			213'	
3:00	300	"	"			213'	
4:00	360	"	"			213'	
5:00	420	"	"			213'	
6:00	480	"	"			213'	
7:00	540	"	"			213'	

Form No. 16824A

PUMPING TEST DATA

Test conducted by: CAROLINA WELL & PUMP CO., INC. WORTH PICKARD-BUSTER LOCKLEAR
Well Owner: TOWN OF ABERDEEN Address:
Pumped Well No: 17 Location: County: MOORE
Observation Well Locations:
Airline Lengths: Pumped Well Observation Wells
Remarks: 6X4 ORIFICE

Pumping Rate Measured With: ORIFICE Water Levels Measured With: ELECTRIC TAPE

PUMP WELL DATA

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
	STATIC	WATER	LEVEL			150'1"	
10:00		STARTED	PUMPING	TEST		150'1"	
10:05	5	15	250			181'	
10:10	10	15	250			186'3"	
10:15	15	15	250			186'5"	
10:20	20	15	250			186'8"	
10:25	25	15	250			186'10"	
10:30	30	15	250			186'11"	
10:35	35	15	250			186'11"	
10:40	40	15	250			187'2"	
10:45	45	15	250			187'3"	
10:50	50	15	250			187'4"	
10:55	55	15	250			187'6"	
11:00	60	15	250			187'7"	
11:05	65	15	250			187'8"	
11:10	70	15	250			187'10"	
11:15	75	15	250			187'11"	
11:20	80	15	250			188'	
11:25	85	15	250			188'2"	
11:30	90	15	250			188'2"	
11:35	95	15	250			188'4"	
11:40	100	15	250			188'5"	
11:45	105	15	250			188'6"	
11:50	110	15	250			188'8"	
11:55	115	15	250			188'10"	
12:00	120	15	250			191'	
12:10	130	15	250			191'1"	
12:20	140	15	250			191'2"	
12:30	150	15	250			191'4"	
12:40	160	15	250			191'4"	
12:50	170	15	250			191'6"	
1:00	180	15	250			191'7"	
1:15	195	15	250			191'9"	
1:30	210	15	250			191'11"	
1:45	225	15	250			192'1"	
2:00	240	15	250			192'2"	
2:30	270	15	250			192'4"	
3:00	300	15	250			192'6"	
4:00	360	15	250			192'6"	
5:00	420	15	250			192'7"	
6:00	480	15	250			192'8"	
7:00	540	15	250			192'8"	
8:00	600	15	250			192'9"	
9:00	660	15	250			192'9"	

NOV-01-2001 12:18 AM

Water Wells and Test Holes
Pump Sales and Service

Carolina Well & Pump Co. Inc.

Serving the Carolinas since 1961

Down Hole T V
Electric and Gramma
Logging

Town of Aberdeen

Well # 18

DRILLERS LOG

Certification # 2124

Worth F. Pickard

WORTH F. PICKARD

0-01 - top soil
01- 04-Sand
04- 09- Clay
09-24 - Sandy Clay
24-27 - Hard Clay
27-42 - Sand
42-45 - Clay
45-56 - Sand
56-86 - Sandy Clay
86-94 - Sand with streaks of clay
94-112- Sand
112- 140 - Sandy clay mixed with clay
140- 160 - Sand
160- 174 - Sand & Clay
174- 184 - Good Sand
184-187 - Clay
187-205 - Good Sand
205-218 - Clay with a little sand
218-230 - Soft Clay
230-290 - Clay

(18)

North Carolina - Department of Environment, Health, and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29578 - Raleigh, N.C. 27626-0578
Phone (919) 733-3221

FOR OFFICE USE ONLY
QUAD. NO. _____ SERIAL NO. _____
Lat. _____ Long. _____ RO _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: Worth F. Pickard

DRILLER REGISTRATION NUMBER: 2124

STATE WELL CONSTRUCTION PERMIT NUMBER: WS0600942

1. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Aberdeen County: moore
   1000 ft off Hwy 211 - moore-Hoke Cty line
   (Road, Community, or Subdivision and Lot No.)
2. OWNER Town of Aberdeen
   ADDRESS PO Box 785
   (Street or Route No.)
   Aberdeen NC 28315
   City or Town State Zip Code
3. DATE DRILLED 8/20/01 USE OF WELL town
4. TOTAL DEPTH 216'
5. CUTTINGS COLLECTED YES ☑ NO ☐
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☑
7. STATIC WATER LEVEL Below Top of Casing: 70 FT.
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS 2 FT. Above Land Surface*

* Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118

9. YIELD (gpm): 225 METHOD OF TEST pumping
10. WATER ZONES (depth): 160 - 182
    188 - 205
11. CHLORINATION: Type HTH Amount 5lbs
12. CASING:

	Depth From	Depth To	Diameter	Wall Thickness or Weight/Ft.	Material
outer	0	80 Ft.	20	3/8"	steel
Inner	+2	160 Ft.	8"	sch40	steel
	182	188 Ft.			
	205	- 216			

13. GROUT:

Depth From	Depth To		Material	Method
0	80	Ft.	Cement	pump
		Ft.		

14. SCREEN:

Depth From	Depth To		Diameter		Slot Size		Material
160	182	Ft.	8"	in.	30	in.	S Steel
188	205	Ft.	8"	in.	30	in.	S Steel
		Ft.		in.		in.	

15. SAND/GRAVEL PACK:

Depth From	Depth To		Size	Material
216	TOP	Ft.	#4	gravel
		Ft.		

16. REMARKS: _____

DEPTH From	DEPTH To	DRILLING LOG Formation Description

If additional space is needed use back of form

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Worth F. Pickard 8/2

SIGNATURE OF CONTRACTOR OR AGENT DATE

Submit original to Division of Environmental Management and copy to well owner.

GW-1 REV. 3/96

PUMPING TEST DATA

Test conducted by: CAROLINA WELL & PUMP J. LOCKLEAR
Well Owner: TOWN OF ABERDEEN Address: SAME
Pumped Well No: #16 Location: County: MOORE
Observation Well Locations:
Airline Lengths: Pumped Well #16 Observation Wells
Remarks:
3 X 4 ORR. FICE
Pumping Rate Measured With: E TOPO Water Levels Measured With: E. TOPO

PUMP WELL DATA

Date and Time	Elapsed Time Min.	Piezometer Tube Reading Inches	Pumping Rate GPM	Pump Discharge Pressure	Altitude Gauge Reading Feet	Feet to Water	Remarks
AUG-20-01							
9:30		27½	225			70'	
9:35		27½	225			120'	
9:40		27½	225			120'	
9:45		27½	225			125'	
9:50		27½	225			125'	
10:55		27½	225			125'	
10:00		27½	225			130'	
10:05		27½	225			130'	
10:15		27½	225			130'	
10:20		27½	225			130'	
10:25		27½	225			130'	
10:30		27½	225			130'	
10:35		27½	225			130'	
10:40		27½	225			130'	
10:45		27½	225			130'	
10:50		27½	225			130'	
10:55		27½	225			130'	
11:00		27½	225			130'	
11:05		27½	225			130'	
11:10		27½	225			130'	
11:15		27½	225			130'	
11:20		27½	225			130'	
11:25		27½	225			130'	
11:30		27½	225			130'	
12:00		27½	225			130'	
12:30		27½	225			130'	
1:30		27½	225			135'	
2:30		27½	225			135'	
3:30		27½	225			135'	
4:30		27½	225			135'	
5:30		27½	225			135'	
6:30		27½	225			135'	
7:30		27½	225			135'	
8:30		27½	225			135'	
9:30		27½	225			135'	
10:30		27½	225			135'	
11:30		27½	225			135'	
12:30		27½	225			135'	
1:30		27½	225			135'	
2:30		27½	225			135'	
3:30		27½	225			135'	
4:30		27½	225			135'	
5:30		27½	225			135'	
6:30		27½	225			135'	

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NON RESIDENTIAL WELL CONSTRUCTION RECORD

North Carolina Department of Environment and Natural Resources- Division of Water Quality

WELL CONTRACTOR CERTIFICATION # 2111

1. WELL CONTRACTOR:

Thomas Bill
Well Contractor (Individual) Name

Bill's Well Drilling Co. Inc.
Well Contractor Company Name

STREET ADDRESS 800 McArthur Rd

Fayetteville, NC 28311
City or Town State Zip Code

(910)- 488-3740
Area code- Phone number

2. WELL INFORMATION:

SITE WELL ID #(if applicable)

STATE WELL PERMIT#(if applicable) WS06-00991

DWQ or OTHER PERMIT #(if applicable)

WELL USE (Check Applicable Box) Monitoring ☐ Municipal/Public ☒
Industrial/Commercial ☐ Agricultural ☐ Recovery ☐ Injection ☐
Irrigation ☐ Other ☐ (list use)

DATE DRILLED 1-20-06

TIME COMPLETED 5:00 AM ☒ PM ☒

3. WELL LOCATION:

CITY: Aberdeen COUNTY Moore

Well #19 Guybo Street
(Street Name, Numbers, Community, Subdivision, Lot No., Parcel, Zip Code)

TOPOGRAPHIC / LAND SETTING:
☒ Slope ☐ Valley ☐ Flat ☐ Ridge ☐ Other
(check appropriate box)

LATITUDE 3 ___ ___
LONGITUDE ___ ___ ___

May be in degrees, minutes, seconds or in a decimal format

Latitude/longitude source: ☐ GPS ☒ Topographic map
(location of well must be shown on a USGS topo map and attached to this form if not using GPS)

4. FACILITY- is the name of the business where the well is located.

FACILITY ID #(if applicable)

NAME OF FACILITY Town of Aberdeen Public Works

STREET ADDRESS 121Purnell Cr

Aberdeen, NC 28315
City or Town State Zip Code

CONTACT PERSON Ricky Monroe

MAILING ADDRESS PO Box 785

Aberdeen, NC 28315
City or Town State Zip Code

(910)- 944-7012
Area code - Phone number

5. WELL DETAILS:

a. **TOTAL DEPTH:** 92

b. **DOES WELL REPLACE EXISTING WELL?** YES ☐ NO ☒

c. **WATER LEVEL** Below Top of Casing: 27 FT.
(Use "+" if Above Top of Casing)

d. **TOP OF CASING IS** 2 FT. Above Land Surface*
*Top of casing terminated at/or below land surface may require a variance in accordance with 15A NCAC 2C .0118.

e. **YIELD (gpm):** 90 **METHOD OF TEST** Pumping

f. **DISINFECTION: Type** HTH **Amount** 5 lbs

g. **WATER ZONES** (depth):

From	To	From	To
67	82		

6. CASING:

	Depth To	Ft.	Diameter	Thickness/ Weight	Material
From +1	63	Ft.	20"	sch40	steel
From +2	67	Ft.	10"	sch10	S. S.
From	To	Ft.			

7. GROUT:

	Depth To	Ft.	Material	Method
From 0	63	Ft.	cement	pumped
From	To	Ft.		
From	To	Ft.		

8. SCREEN:

	Depth To	Ft.	Diameter	Slot Size	Material
From 67	82	Ft.	10 in.	030 in.	S. S.
From	To	Ft.	in.	in.	
From	To	Ft.	in.	in.	

9. SAND/GRAVEL PACK:

	Depth To	Ft.	Size	Material
From 0	90	Ft.	#4	Gravel
From	To	Ft.		
From	To	Ft.		

10. DRILLING LOG

From - To	Formation Description
0 - 28	Orange Sand & Clay
28 - 36	Gray Sand & Clay
36 - 40	Yellow Sand
40 - 41	Gray Clay
41 - 57	Sand
57 - 59	Gray clay
59 - 70	Sand
70 - 95	Pea Gravel Mixed With Clay

11. REMARKS:

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Thomas W. Bill 2/15/06
SIGNATURE OF CERTIFIED WELL CONTRACTOR DATE

Thomas W. Bill
PRINTED NAME OF PERSON CONSTRUCTING THE WELL

Submit the original to the Division of Water Quality within 30 days. Attn: Information Mgt., 1617 Mail Service Center – Raleigh, NC 27699-1617 Phone No. (919) 733-7015 ext 568.

Form GW-1b
Rev. 7/05

Well #19 Town of Aberdeen, NC
February, 2005

Time	Water Level	Pumping Rate			Remarks
10:15:00 AM	27	100			
10:20:00 AM	64	100			
10:25:00 AM	69	95			
10:30:00 AM	69	93			
10:35:00 AM	69	93			
10:40:00 AM	69	93			
10:45:00 AM	69	93			
10:50:00 AM	69	93			
11:00:00 AM	69	93			
11:10:00 AM	69	93			
11:20:00 AM	69	92			
11:30:00 AM	69	92			
11:40:00 AM	69	92			
11:50:00 AM	69	92			
12:00:00 PM	69	92			
12:15:00 PM	69	92			
12:30:00 PM	69	92			
12:45:00 PM	69	92			
1:00:00 PM	69	92			
1:30:00 PM	69	92			
2:00:00 PM	69	92			
3:00:00 PM	69	92			
4:00:00 PM	69	92			
5:00:00 PM	69	91			
6:00:00 PM	69	90			
7:00:00 PM	69	90			
8:00:00 PM	69	90			
9:00:00 PM	69	90			
10:00:00 PM	69	90			
11:00:00 PM	69	90			
12:00:00 AM	69	90			
1:00:00 AM	69	90			
2:00:00 AM	69	90			
3:00:00 AM	69	90			

Well #19 Town of Aberdeen, NC
February, 2005

Time	Water Level	Pumping Rate			Remarks
4:00:00 AM	69	90			
5:00:00 AM	69	90			
6:00:00 AM	69	90			
7:00:00 AM	69	90			
8:00:00 AM	69	90			
9:00:00 AM	69	90			
10:00:00 AM	69	90			
10:15:00 AM	69	90			
10:30:00 AM	40	0			
10:45:00 AM	31	0			
11:00:00 AM	29	0			
11:30:00 AM	28	0			
12:00:00 PM	27	0			