



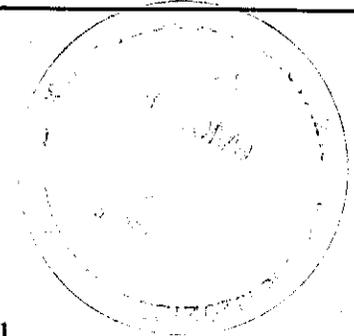
Scanned by Wilson	Date 8/14/07	Doc ID # RCO 2905
----------------------	-----------------	----------------------

Michael F. Easley, Governor
William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Alan W. Klimek, P.E. Director
Division of Water Quality

May 5, 2006

Timothy G. Broome, P.E., Director of Infrastructure and Engineering
Johnston County
Department of Public Utilities
PO Box 2263
Smithfield, NC 27577



Subject: Permit No. WQ0019631
Johnston County
Conjunctive Use at the Johnston County Landfill
Reclaimed Water Utilization System
Johnston County

Dear Mr. Broome:

In accordance with your modification request received May 18, 2005, and subsequent additional information received November 18, 2005, we are forwarding herewith Permit Number. WQ0019631, dated May 5, 2006, to Johnston County for the continued operation of the subject wastewater treatment and reclaimed water utilization system. This permit modification is for the purpose of adding twelve (12) additional spray fields/zones to the already existing spray system.

This permit shall be effective from the date of issuance until March 31, 2007, shall void Permit No. WQ0019631 issued June 13, 2003, and shall be subject to the conditions and limitations as specified therein. Please pay particular attention to the monitoring requirements in this permit. Failure to establish an adequate system for collecting and maintaining the required operational information will result in future compliance problems.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within thirty (30) days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made this permit shall be final and binding.

One set of approved plans and specifications is being forwarded to you. If you need additional information concerning this matter, please contact Matthew Fleahman at (919) 715-6173.

Sincerely,

Alan W. Klimek, P.E.

cc: Johnston County Health Department
Raleigh Regional Office, Aquifer Protection Section
Technical Assistance and Certification Unit
~~Division of Waste Management, Solid Waste Section~~
Aquifer Protection Central Files
LAU Files

One
North Carolina
Naturally

NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
RALEIGH
WASTEWATER TREATMENT AND RECLAIMED WATER UTILIZATION PERMIT

In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules, and Regulations

PERMISSION IS HEREBY GRANTED TO

Johnston County
Johnston County

FOR THE

construction and continued operation of a 401,918 GPD (266,918 GPD previously permitted and an additional 135,000 GPD) reclaimed water utilization system, consisting of spray irrigation onto 29 (17 previously permitted) individual spray fields/zones totaling 447.61 acres at the Johnston County Landfill, to serve Johnston County with no discharge of wastes to the surface waters, pursuant to the application received May 18, 2005 and subsequent additional information received by the Division, and in conformity with the project plan, specifications, and other supporting data subsequently filed and approved by the Department of Environment and Natural Resources and considered a part of this permit.

This permit shall be effective from the date of issuance until March 31, 2007, shall void Permit No. WQ0019631 issued June 13, 2003, and shall be subject to the following specified conditions and limitations:

I. PERFORMANCE STANDARDS

1. The reclaimed water utilization facilities shall be effectively maintained and operated at all times so that there is no discharge to the surface waters, nor any contamination of ground waters, which will render them unsatisfactory for normal use. In the event that the facilities fail to perform satisfactorily, including the creation of nuisance conditions or failure of the irrigation area to adequately assimilate the wastewater, the Permittee shall take immediate corrective actions including those actions that may be required by the Division of Water Quality or the Division of Waste Management, Solid Waste Section, such as:
 - a. the temporary or permanent termination of those spray irrigation zones not performing satisfactorily, causing nuisance conditions, or failing to assimilate the wastewater, and
 - b. the construction of additional or replacement wastewater treatment and disposal facilities.
2. The issuance of this permit shall not relieve the Permittee of the responsibility for damages to surface water or ground water resulting from the operation of this facility.

3. Diversion or bypassing of the untreated wastewater from the treatment facilities is prohibited.
4. The following buffers shall be maintained:
 - a. 100 feet between wetted areas and water supply wells,
 - b. 100 feet between wetted areas and waters classified as SA,
 - c. 25 feet between wetted areas and surface waters not classified as SA,
 - d. 100 feet between wastewater treatment units and wells,
 - e. 50 feet between reclaimed water storage/irrigation ponds and property lines, and
 - f. 50 feet between wastewater treatment units and property lines.

Some of the buffers specified above may not have been included in previous permits for this waste treatment and disposal system. These buffers are not intended to prohibit or prevent modifications, which are required by the Division, to improve performance of the existing treatment facility. These buffers do, however, apply to modifications of the treatment and disposal facilities that are for the purpose of increasing the flow that is tributary to the facility. These buffers do apply to any expansion or modification of the irrigation areas and apply in instances in which the sale of property would cause any of the buffers now complied with, for the treatment and disposal facilities, to be violated. The applicant is advised that any modifications to the existing facilities will require a permit modification.

5. Public access to the irrigation sites shall be controlled during active site use. Such controls may include the posting of signs showing the activities being conducted at each site. A sign shall be posted in plain sight in the clubhouse showing these activities.
6. A leakage test shall be performed on the dosing tank to insure that any exfiltration occurs at a rate, which does not exceed twenty (20) gallons per twenty-four (24) hours per 1,000 gallons of tank capacity. The engineer's certification will serve as proof of compliance with this condition.
7. This permit shall become void if the Division of Waste Management, Solid Waste Section terminates the spray irrigation modification of Permit 51-02. This permit in no way alleviates the Permittee from any additional spray irrigation restrictions and/or obligations placed on them by the Solid Waste Section in the form of future permit modifications.
8. This permit cannot be altered in any way (with the exception of simple permit renewal) without prior approvals from the Division of Water Quality and from the Division of Waste Management, Solid Waste Section.
9. The following shall be requirements for the reclaimed water distribution, storage, and utilization facilities:
 - a. All reclaimed water valves, storage facilities, and outlets shall be tagged or labeled to warn the public or employees that the water is not intended for drinking. Where appropriate, such warning shall inform the public or employees to avoid contact with the water.
 - b. All reclaimed water piping, valves, outlets, and other appurtenances shall be color-coded, taped, or otherwise marked to identify the source of the water as being reclaimed water.
 - i. All reclaimed water piping and appurtenances shall be either colored purple (i.e., Pantone 522) and embossed or integrally stamped or marked "CAUTION: RECLAIMED WATER – DO NOT DRINK" or be installed with a purple (i.e., Pantone 522) identification tape or polyethylene vinyl wrap. The warning shall be stamped on opposite sides of the pipe and repeated every three feet or less.
 - ii. Identification tape shall be at least three inches wide and have white or black lettering on purple (i.e., Pantone 522) field stating "CAUTION: RECLAIMED WATER – DO NOT DRINK." Identification tape shall be installed on top of reclaimed water pipelines,

fastened at least every 10 feet to each pipe length and run continuously the entire length of the pipe.

- c. All reclaimed water valves and outlets shall be of a type, or secured in a manner, that permits operation by authorized personnel only.
- d. Above-ground hose bibs (i.e., spigots or other hand-operated connections) shall not be present. Hose bibs shall be located in locked below-grade vaults that shall be clearly labeled as being of non-potable quality. As an alternative to the use of locked below-grade vaults with standard hose bibs services, hose bibs, which can only be operated by a special tool or connected to a special hose connection, may be placed in non-lockable underground services boxes clearly labeled as non-potable water.

II. OPERATION AND MAINTENANCE REQUIREMENTS

- 1. The facilities shall be properly maintained and operated at all times.
- 2. Upon classification of the wastewater treatment and irrigation facilities by the Water Pollution Control System Operators Certification Commission (WPCSOCC), the Permittee shall designate and employ a certified operator to be in responsible charge (ORC) and one or more certified operator(s) to be back-up ORC(s) of the facilities in accordance with 15A NCAC 8G .0201. The ORC shall visit the facilities in accordance with 15A NCAC 8G .0204 or as specified in this permit and shall comply with all other conditions specified in these rules.
- 3. A suitable, year-round vegetative cover shall be maintained on the irrigation areas. The reclaimed wastewater may also be utilized on non-vegetative areas to establish seed beds or sprig beds, to nurture vegetative growth and to expedite and enhance land restoration/reclamation/and erosion control efforts.
- 4. Irrigation shall not be performed during inclement weather or when the ground is in a condition that will cause runoff.
- 5. Adequate measures shall be taken to prevent wastewater runoff from the irrigation field.
- 6. The application rate shall not exceed a cumulative loading of over any twelve (12) month period as given by the following tables. The instantaneous application rate not to exceed 0.3 inches per hour.

Field #	Crop	Max. Irrigation Rate (in/yr)	Acres	Max. Annual Application (gal/yr)
1	Trees	20	32.35	17,568,800
2	CB*	20	54.73	29,723,100
3	CB*	16	10.44	4,535,900
4	CB*	16	6.03	2,619,800
5	Grass	16	24.11	10,475,000
6	Grass/Trees	14	8.82	3,353,000
7	Grass/Trees	14	5.15	1,957,800
8	Grass/Trees	14	28.97	11,013,200
9	Grass/Trees	15	2.35	957,200
10	Grass/Trees	15	6.91	2,814,500
Livestock Area & Forest Service Area	Grass	15	5.9	2,403,200

III. MONITORING AND REPORTING REQUIREMENTS

1. Any monitoring (including groundwater, surface water, soil or plant tissue analyses) deemed necessary by the Division to insure surface and ground water protection will be established and an acceptable sampling reporting schedule shall be followed.
2. Adequate records shall be maintained by the Permittee tracking the amount of wastewater disposed. These records shall include, but are not necessarily limited to the following information:
 - a. date and time of irrigation,
 - b. volume of wastewater irrigated,
 - c. zone irrigated,
 - d. length of time zone is irrigated,
 - e. continuous weekly, monthly, and year-to-date hydraulic (inches/acre) loadings for each zone,
 - f. weather conditions, and
 - g. maintenance of cover crops.
3. Three (3) copies of all operation and disposal records (as specified in condition III 2) on Form NDAR-1 shall be submitted monthly on or before the last day of the following month to the Division of Water Quality at the address below. One (1) copy of all operation and disposal records (as specified in condition III 2) on Form NDAR-1 shall be submitted monthly on or before the last day of the following month to the Division of Waste Management at the address below:

Division of Water Quality
1617 Mail Service Center
Attn: Information Processing Unit
Raleigh, North Carolina 27699-1617

Division of Waste Management
Solid Waste Section
Compliance Hydrogeologist
1646 Mail Service Center
Raleigh, North Carolina, 27699-1646A

4. Noncompliance Notification:

The Permittee shall report by telephone to the Raleigh Regional Office, telephone number (919) 571-4700, as soon as possible, but in no case more than 24 hours or on the next working day following the occurrence or first knowledge of the occurrence of any of the following:

- a. Any occurrence at the wastewater treatment facility which results in the treatment of significant amounts of wastes which are abnormal in quantity or characteristic, such as the dumping of the contents of a sludge digester; the known passage of a slug of hazardous substance through the facility; or any other unusual circumstances.
- b. Any process unit failure, due to known or unknown reasons, that render the facility incapable of adequate wastewater treatment such as mechanical or electrical failures of pumps, aerators, compressors, etc.
- c. Any time that self-monitoring information indicates that the facility has gone out of compliance with its permit limitations.

Roadway Dust Control Area	Grass/Dirt Road	15	6.7	2,729,000
Closed LF Cells 1 & 2	Grass	5	15.9	2,158,800
Closed LF Cell 3	Grass	5	11.26	1,528,800
Closed LF Cell 4	Grass	5	26.42	3,587,100
Closed LF Cell 5	Grass	5	27.52	15,695,000
Borrow Area C	Grass	8	12.68	33,580,000
		Totals:	286.24	146,700,200

CB* Coastal Bermuda hay, overseed with annual rye as a winter crop

Johnston County Landfill Irrigation Phase II				
Field #	Zone	Max. Irrigation Rate (in/yr)	Acres	Max. Annual Application (gal/yr)
1	1	38.61	9.32	9,771,378
4	1	38.61	16.62	17,424,926
5	1	38.61	5.65	5,923,636
6	1	38.61	5.65	5,923,636
7	2	14.31	5.35	2,078,900
8	1	38.61	5.65	5,923,636
9	2	14.31	35.34	13,732,395
10	2	14.31	5.65	2,195,474
11	2	14.31	5.65	2,195,474
12	2	14.31	6.74	2,619,025
13	2	14.31	12.26	4,763,983
14	2	14.31	9.20	3,574,930

Only those spray irrigation fields (zones) specified above and delineated in the approved Plans can be irrigated with reuse quality wastewater. Spray irrigation of reuse quality wastewater onto tracks of land not specified above is not approved, and can only be approved with permit modification.

7. Irrigation in Spray Field #1 of the Johnston County Landfill Irrigation Phase II shall not be performed during windy weather such that spray irrigation water drifts onto adjacent property.
8. No type of wastewater other than that from the Central Johnston County Regional wastewater treatment facility shall be irrigated onto the irrigation area.
9. If a spray irrigation field has been modified such that the ground topography has been altered (from borrow operations, for example) compared to the approved Plans, then spray irrigation activities may only be reinstated at the altered field with permit modification because of the altering of the ground topography. Such a permit modification application must be accompanied by a re-evaluation of the soils and groundwater of the altered field.

Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at telephone number (800) 662-7956, (800) 858-0368, or (919) 733-3300. Persons reporting such occurrences by telephone shall also file a written report in letter form within five (5) days following first knowledge of the occurrence. This report must outline the actions taken or proposed to be taken to ensure that the problem does not recur.

IV. GROUNDWATER REQUIREMENTS

1. The following monitoring wells shall be sampled every month proceeding through the start-up of waste disposal operations, and thereafter every month for the parameters listed below:

DWQ monitoring wells: DWQ-MW-1
 DWQ-MW-2
 DWQ-MW-3

Landfill monitoring wells: CDLMW-5
 MW-3
 MW-5-1
 MW-5-2
 MW-5-10
 PZ-3

Sampling Parameter List: Water Level

The depth to water in each well shall be measured from the surveyed point on the top of the casing. The measuring points (top of well casing) of all monitoring wells shall be surveyed relative to a common datum.

All reports and documentation GW-59 shall be mailed to the following two addresses:

Division of Water Quality
1617 Mail Service Center
Attn: Information Processing Unit
1636 Mail Service Center
Raleigh, North Carolina 27699-1636

Division of Waste Management
Solid Waste Section
Compliance Hydrogeologist
1646 Mail Service Center
Raleigh, NC 27699-1646

(Note: Updated blank forms (GW-1 and GW-59) may be downloaded from the Groundwater Section's website at <http://gw.chnr.state.nc.us/> or requested from the Aquifer Protection Section at 1636 Mail Service Center, Raleigh, NC 27699-1636.

The results of the sampling and analysis must be received on Form GW-59 (Groundwater Quality Monitoring: Compliance Report Form) by the Division of Water Quality, Information Processing Unit and the Division of Waste Management, Solid Waste Section, on or before the last working day of the month following the sampling month. The data of all groundwater sampling analyses required by the permit conditions must be reported using the most recent GW-59 form along with attached copies of the laboratory analyses.

2. Waste application activities shall not occur when the vertical separation between ground surface and the water table is less than one (1) foot. Verification of the water table elevation can be confirmed by water level readings obtained from the monitor wells near the site or auger boring(s), which must be done within 24 hours, prior to application of wastewater. Any open borings must be properly filled with native soil, prior to application to decrease the chance of any waste contaminating the groundwater.
3. The compliance boundary and review boundary for wastewater disposal systems are specified by 15A NCAC 2L. For systems utilizing reclaimed water, 15A NCAC 2H .0219(k) specifies that both the compliance boundary and review boundary shall be established at the property line. An exceedance of groundwater quality standards at or beyond the compliance boundary is subject to immediate remediation action in addition to the penalty provisions under North Carolina General Statute 143-215.6A(a)(1).
4. Any groundwater quality monitoring, as deemed necessary by the Division of Water Quality, Groundwater Section or by the Division of Waste Management, Solid Waste Section, shall be provided.

V. INSPECTIONS

1. Adequate inspection, maintenance, and cleaning shall be provided by the Permittee to insure proper operation of the subject facilities.
2. The Permittee or his designee shall inspect the wastewater treatment and disposal facilities to prevent malfunctions and deterioration, operator errors and discharges which may cause or lead to the release of wastes to the environment, a threat to human health, or a nuisance. The Permittee shall keep an inspection log or summary including at least the date and time of inspection, observations made, and any maintenance, repairs, or corrective actions taken by the Permittee. This log of inspections shall be maintained by the Permittee for a period of three years from the date of the inspection and shall be made available upon request to the Division or other permitting authority.
3. Any duly authorized officer, employee, or representative of the Division may, upon presentation of credentials, enter and inspect any property, premises or place on or related to the disposal site or facility at any reasonable time for the purpose of determining compliance with this permit; may inspect or copy any records that must be maintained under the terms and conditions of this permit, and may obtain samples of groundwater, surface water, or leachate.

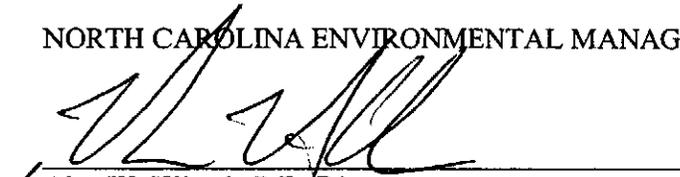
VI. GENERAL CONDITIONS

1. This permit shall become voidable unless the facilities are constructed in accordance with the conditions of this permit, the approved plans and specifications, and other supporting data.
2. This permit is effective only with respect to the nature and volume of wastes described in the application and other supporting data.
3. This permit is not transferable. In the event there is a desire for the facilities to change ownership, or there is a name change of the Permittee, a formal permit request must be submitted to the Division accompanied by an application fee, documentation from the parties involved, and other supporting materials as may be appropriate. The approval of this request will be considered on its merits and may or may not be approved.

4. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to an enforcement action by the Division in accordance with North Carolina General Statute 143-215.6A to 143-215.6C.
5. The issuance of this permit does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances which may be imposed by other government agencies (local, state, and federal) which have jurisdiction, including but not limited to applicable river buffer rules in 15A NCAC 2B.0200, erosion and sedimentation control requirements in 15A NCAC Chapter 4 and under the Division's General Permit NCG010000, and any requirements pertaining to wetlands under 15A NCAC 2B .0200 and 2H .0500.
6. The Permittee shall retain a set of approved plans and specifications for the subject facility for the life of the project.
7. The Permittee shall pay the annual administering and compliance fee within thirty days of being billed by the Division. Failure to pay the fee accordingly may cause the Division to initiate action to revoke this permit as specified by 15 NCAC 2H .0205 (c)(4).
8. The Permittee, at least six (6) months prior to the expiration of this permit, shall request its extension. Upon receipt of the request, the Commission will review the adequacy of the facilities described therein, and if warranted, will extend the permit for such period of time and under such conditions and limitations as it may deem appropriate.

Permit issued this the May 5, 2006

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



Alan W. Klimek, P.E., Director
Division of Water Quality
By Authority of the Environmental Management Commission

Permit Number WQ0019631

Permit No. WQ0019631
May 5, 2006

ENGINEER'S CERTIFICATION

_____ Partial _____ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project,

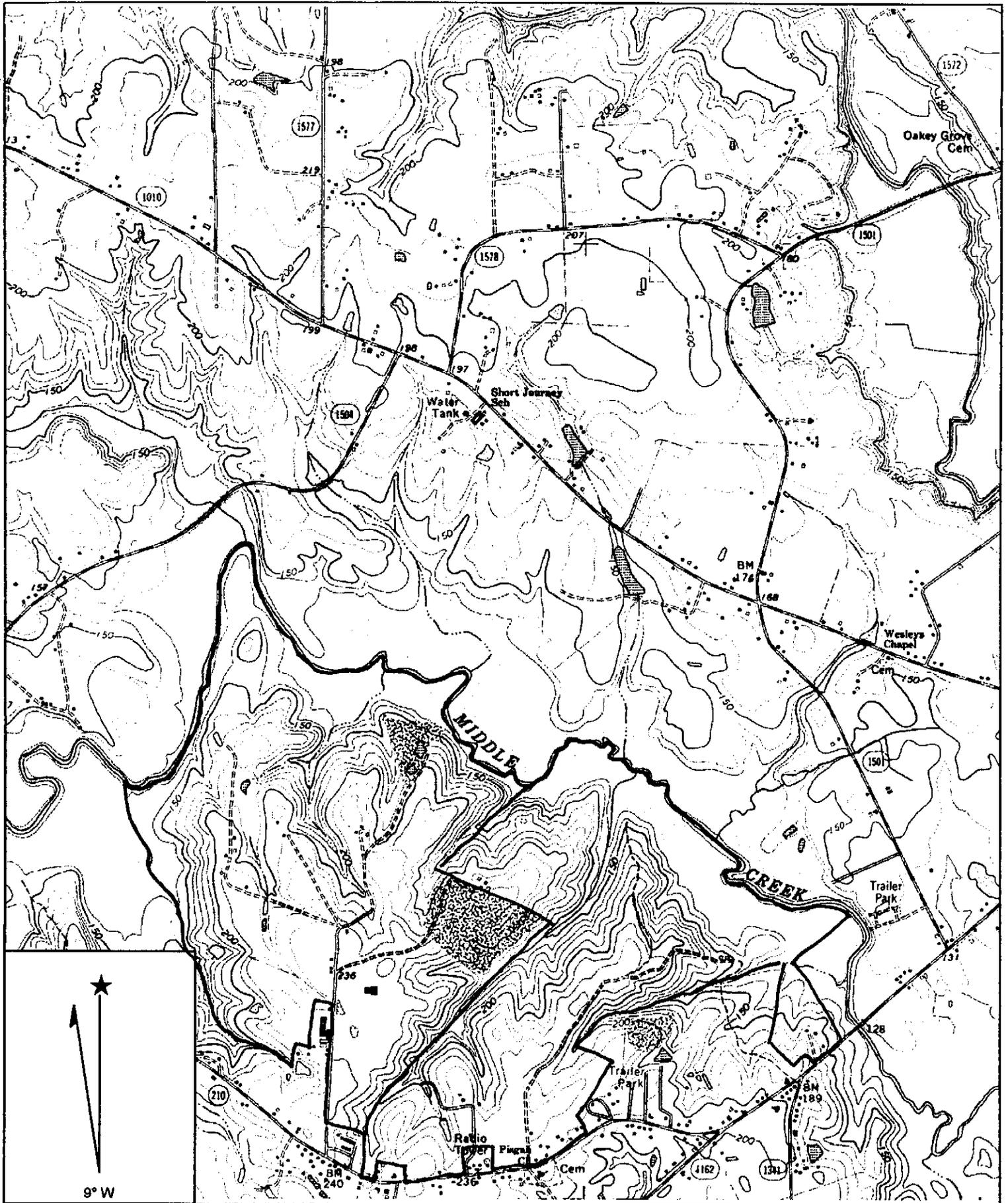
Project Name

Location and County

for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of this permit, the approved plans and specifications, and other supporting materials.

Signature _____ Registration No.

Date _____



Name: POWHATAN
 Date: 4/15/2005
 Scale: 1 inch equals 2000 feet

Location: 035° 31' 33.4" N 078° 25' 15.2" W