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Michael F. Easley, Governor

William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural ResourcesAlan W. Klimek, P.E. Director
Division of Water Quality

November 29, 2004

JERRY H. TWEED - VICE PRESIDENT
HEATER UTILITIES, INC.
202 MACKENAN COURT
CARY, NORTH CAROLINA 27511

Subject: Permit No. WQ0022870
Buck Mountain Development
Wastewater Treatment and
Reclaimed Water Utilization System
Chatham County

Dear Mr. Tweed:

In accordance with your modification request received November 2, 2004, we are forwarding herewith Permit Number. WQ0022870, dated November 29, 2004, to Heater Utilities, Inc. for the construction and operation of the subject wastewater treatment and reclaimed water utilization system.

This permit shall be effective from the date of issuance until February 28, 2009, shall void Permit No. WQ0022870 issued March 22, 2004, 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 Nathaniel Thornburg at (919) 715-6160.

Sincerely,

Alan W. Klimek, P.E.

cc: Chatham County Health Department
Raleigh Regional Office, Aquifer Protection Section
Mark Ashness, PE - CE Group, Inc.
Lee Fleming Jr., PE
Steven J. Levitas - Kilpatrick Stockton LLP
Technical Assistance and Certification Unit
Aquifer Protection Central Files
LAU Files

Aquifer Protection Section
Internet: <http://h2o.enr.state.nc.us>

1636 Mail Service Center
2728 Capital Boulevard

Raleigh, NC 27699-1636
Raleigh, NC 27604

Phone (919) 733-3221
Fax (919) 715-0588
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Customer Service
1-877-623-6748

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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

Heater Utilities, Inc.
Chatham County

FOR THE

construction and operation of a 270,000 GPD reclaimed water utilization system consisting of one (1) 2,860,825 gallon clay-lined upset pond to provide a minimum of five (5) days of upset storage, one (1) upset pond pump station with two (2) 200 GPM pumps, one (1) 42,839,747 gallon clay-lined irrigation storage pond to provide a minimum of 92 days of storage, one (1) 16 foot by 7.6 foot by 8 foot irrigation pump tank with three (3) 600 GPM pumps and spray irrigation of wastewater on approximately 218 acres on common areas and golf course areas pursuant to an Effluent Easement and Irrigation Agreement between the Permittee and Jordan Lake Preserve Corporation, and the

construction and operation of a 500,000 gallon per day (GPD) wastewater treatment system consisting of one (1) 165,900 gallon equalization basin with a 15 horsepower (HP) aerator, a manually cleaned bar screen, a flow splitter box, two (2) 370,200 gallon aeration basins with two (2) 15 HP aerators in each basin, two (2) 63,000 gallon clarifiers each with two (2) air lift pumps, one (1) 130,800 sludge holding basin with two (2) 10 HP aerators and a variable water level air lift pump, four (4) 100 square foot (ft²) tertiary filters, one (1) 32,600 gallon clearwell with four (4) 750 gallon per minute (GPM) pumps, one (1) 38,200 gallon mudwell with two (2) 200 GPM pumps, one (1) 25,100 gallon chlorine contact chamber with two (2) variable speed pumps, two (2) UV disinfections systems with 20 lamps each (rated for 500,000 GPD), one (1) 23,800 gallon dechlorination chamber, an ultrasonic effluent flow measuring device, an effluent composite sampler, continuous effluent turbidity monitoring and recording, and a permanent standby generator with automatic transfer switch capable of powering all essential wastewater treatment units,

to serve 726 residences with an approved flow reduction of 250 GPD per residence up to four (4) bedrooms in size (an incremental addition of 80 GPD per bedroom over the 4 bedroom maximum) and general purpose facilities (accounting for 8,640 GPD flow) in the Buck Mountain Development with no discharge of wastes to the surface waters, pursuant to the application received November 2, 2004 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 February 28, 2009, shall void Permit No. WQ0022870 issued March 22, 2004, and shall be subject to the following specified conditions and limitations:

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I. PERFORMANCE STANDARDS

1. Upon completion of construction and prior to operation of this permitted facility, a certification must be received from a professional engineer certifying that the permitted facility has been installed in accordance with this permit, the approved plans and specifications, and other supporting materials. If this project is to be completed in phases and partially certified, you shall retain the responsibility to track further construction approved under the same permit, and shall provide a final certificate of completion once the entire project has been completed. Mail the Certification to the Land Application Unit, 1636 Mail Service Center, Raleigh, NC 27699-1636.
2. The Raleigh Regional Office, telephone number (919) 571-4700, shall be notified at least forty-eight (48) hours in advance of operation of the installed facilities so that an in-place inspection can be made. Such notification to the regional supervisor shall be made during the normal office hours from 8:00 a.m. until 5:00 p.m. on Monday through Friday, excluding State Holidays.
3. Please note that the Division has concerns regarding the amount of runoff calculated in the water balance for the irrigation system. If at any time runoff, ponding or other excessive irrigation problems occur, the Permittee may be required to acquire more irrigation area or increase the storage within the system. In addition, future phases of this project shall be required to justify similar runoff calculations.
4. The Permittee shall use a synthetic liner of sufficient thickness if native soils on-site are not available to meet the hydraulic conductivity of no greater than 1×10^{-6} centimeters per second for a compacted 1-foot clay liner.
5. Within 45 days of permit issuance, the Permittee shall record with the Chatham County Register of Deeds, and provide the Division with a copy of, an Effluent Easement and Irrigation Agreement between the Permittee and Jordan Lake Preserve Corporation establishing (i) the Permittee's perpetual right to utilize those portions of the Buck Mountain development so designated in the permit application of the spray irrigation of treated effluent, and (ii) Jordan Lake Preserve Corporation's obligation to dispose of treated effluent generated by the wastewater treatment plant through spray irrigation on designated spray irrigation areas.
6. 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, such as the construction of additional or replacement wastewater treatment and disposal facilities.
7. 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.
8. The residuals generated from these treatment facilities must be disposed in accordance with General Statute 143-215.1 and in a manner approved by the Division.
9. Diversion or bypassing of the untreated wastewater from the treatment facilities is prohibited.
10. 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.

11. 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.
12. The disposal system shall be connected to a rain or moisture sensor that shall indicate when wastewater application is not appropriate in accordance with Condition II(4) of this permit, or irrigation shall only occur upon manual operation by the Operator in Responsible Charge.
13. 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.
14. The soils located on site contain high amounts of silt and clay and are susceptible to compaction when wet. The Permittee shall ensure all necessary precautions are taken to avoid compaction that will have an adverse effect upon the drainage of the irrigation areas.
15. Areas of this site contain soils that are underlain by weathered and hard bedrock. The Permittee shall ensure that extreme care is taken during grading so that a minimum of 12 inches of soil remains above any bedrock when construction is complete.
16. Areas of Cld and Lignum soils have shallow seasonal perched water tables. The Permittee shall ensure that extreme care is taken during grading so that a minimum of 12 inches of soil remains above any perched water tables when construction is complete.

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17. Upon completion of site grading and shaping, a licensed soil scientist shall conduct an amended site evaluation, and it shall be submitted to the Division of Water Quality. This report shall specifically address, but not be limited to, the effects of grading/construction upon the original site evaluation. The evaluation should include an investigation of key areas of grading, including soil features such as depth to seasonal high water table, depth to fractured bedrock, soil series, and similar soil features. The report should address the site suitability to ensure the protection of groundwater and the appropriateness of the permitted irrigation rate. Upon completion of site grading and shaping, the amended site evaluation shall be submitted to the Aquifer Protection Section, Raleigh Regional Office, 3800 Barrett Drive, Raleigh NC 27609. No wastewater shall be introduced into the treatment system until written approval from the Division of Water Quality is received.

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.
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 facilities shall be effectively maintained and operated as a non-discharge system to prevent the discharge of any wastewater resulting from the operation of this facility.
7. An automatically activated standby power source shall be on site and operational at all times. If a generator is employed as an alternate power supply, it shall be tested weekly by interrupting the primary power source.
8. No type of wastewater other than that from the Buck Mountain Development shall be irrigated onto the irrigation area.
9. Freeboard in the 5-day upset pond and the wet weather storage pond shall not be less than two (2) feet at any time.
10. A waste-level gauge, to monitor waste levels in the storage pond, shall be installed within 60 days of construction completion and prior to operation. This gauge shall have readily visible permanent markings indicating the maximum liquid level at the top of the temporary liquid storage volume, minimum liquid level at the bottom of the temporary liquid storage volume, and top of the dam elevations. Caution must be taken not to damage the integrity of the liner when installing the gauge.
11. A protective vegetative cover shall be established and maintained on all earthen basin embankments (outside toe of embankment to maximum pumping elevation), berms, pipe runs, erosion control areas, and surface water diversions. Trees, shrubs, and other woody vegetation shall not be allowed to grow on the earthen basin dikes or embankments. Earthen basin embankment areas shall be kept mowed or otherwise controlled and accessible.

12. The application rate over any twelve (12) month period at an instantaneous application rate not to exceed the following shall be adhered to:

Irrigation Field	Irrigation Area (acres)	Predominant Soil Type	Instantaneous Loading Rate (inches/hour)	Annual Loading Rate (inches/year)
F-1	11.40	Nason	0.5	17.58
F-2	5.56	Nason	0.5	17.58
F-2B	4.22	Lignum	0.5	13.0
F-3	10.66	Goldston	0.5	17.58
F-3B	3.01	Cid	0.5	13.0
F-4	7.18	Herndon	0.5	17.58
F-5	13.22	Georgeville	0.5	17.58
F-6	4.94	Georgeville	0.5	17.58
F-7	16.48	Georgeville	0.5	17.58
F-8	4.06	Georgeville	0.5	17.58
F-9	10.11	Nason	0.5	17.58
F-10	5.76	Georgeville	0.5	17.58
F-10B	5.69	Lignum	0.5	13.0
F-11	4.69	Herndon	0.5	17.58
F-11B	4.20	Georgeville	0.5	17.58
F-11C	9.37	Lignum	0.5	13.0
F-12	2.62	Georgeville	0.5	17.58
F-12B	1.54	Cid	0.5	13.0
F-13	8.49	Georgeville	0.5	17.58
F-13B	2.20	Lignum	0.5	13.0
F-14	9.91	Georgeville	0.5	17.58
F-15	4.79	Nason	0.5	17.58
F-16	9.05	Goldston	0.5	17.58
F-17	5.37	Georgeville	0.5	17.58
F-18	17.80	Georgeville	0.5	17.58
DR	14.90	Goldston	0.5	17.58
OS-1	3.08	Georgeville	0.5	17.58
OS-2	1.65	Georgeville	0.5	17.58
OS-3	0.49	Georgeville	0.5	17.58
OS-4	2.71	Nason	0.5	17.58
OS-5	0.95	Nason	0.5	17.58
OS-6	1.29	Tatum	0.5	17.58
OS-6B	1.99	Cid	0.5	13.0
OS-7	3.83	Tatum	0.5	17.58
CH	1.34	Georgeville	0.5	17.58
A	3.65	Herndon	0.5	17.58
Totals	218.13			

13. All wastewater shall be routed to the five-day holding pond should the limit for fecal coliform (daily maximum concentration of 25 per 100 ml) or turbidity (instantaneous maximum of 10 NTU) be exceeded, until such time that the problems associated with the treatment capability of the wastewater treatment plant have been corrected. The wastewater in the five-day holding pond shall be pumped back to the treatment plant for re-treatment or treated in the five-day pond prior to discharge to the storage pond.

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. Influent flow shall be continuously monitored and daily flow values shall be reported on Form NDMR. Influent flow may be represented by effluent flow from the wastewater treatment system prior to storage.

The Permittee shall install an appropriate flow measurement device consistent with approved engineering and scientific practices to ensure the accuracy and reliability of influent flow measurement. Flow measurement devices selected shall be capable of measuring flows with a maximum deviation of less than 10 percent from true flow, accurately calibrated at a minimum of once per year, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. The Permittee shall keep records of flow measurement device calibration on file for a period of at least three years. At a minimum, data to be included in this documentation shall be:

- a. Date of flow measurement device calibration
 - b. Name of person performing calibration
 - c. Percent from true flow
3. As an indicator of proper operation and maintenance, the facility shall produce an effluent in compliance with the following limitations:

Parameter	Monthly Average ^a	Daily (Instantaneous) Maximum ^c
Flow	270,000 GPD	
BOD ₅ (5-day, 20°C)	10 mg/l	15 mg/l
NH ₃ as N	4 mg/l	6 mg/l
TSS	5 mg/l	10 mg/l
Fecal Coliform	14 per 100 ml ^b	25 per 100 ml
Turbidity		10 NTU ^d

The effluent pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.

- ^a Monthly averages for all but fecal coliform shall be the arithmetic mean of all samples collected during the reporting period.
- ^b Monthly average for fecal coliform shall be the geometric mean of all samples collected during the reporting period.
- ^c Daily maximum shall be the maximum value of all samples collected during the reporting period.
- ^d Normal operation of the facilities involves reclaimed water being conveyed to the irrigation pond at all times unless the continuous turbidity monitoring devices initiates an alarm condition. The design of the facilities is such that manual transfer of wastewater to the five-day upset pond is required in this situation. Therefore, in order to ensure that the ORC has sufficient time to conduct such manual operation, the turbidity set point that will trigger an alarm situation and initiate the telemetry system shall not be less than 6.0 NTUs.

The Permittee shall monitor the effluent from the subject facilities at a point prior to storage for the following parameters:

Parameter	Sampling Point	Sampling Frequency	Type of Sample
Flow	Influent or Effluent	Continuous	Recording
Turbidity	Effluent	Continuous	Recording
BOD ₅ (5-day, 20°C)	Effluent	*2/Month	Composite
NH ₃ as N	Effluent	*2/Month	Composite
TSS	Effluent	*2/Month	Composite
Fecal Coliform	Effluent	*2/Month	Grab
Settleable Matter	Effluent	Daily	Grab
Residual Chlorine	Effluent	Daily	Grab
NO ₃	Effluent	**Triannually	Grab
TDS	Effluent	**Triannually	Grab
TOC	Effluent	**Triannually	Grab
Chloride	Effluent	**Triannually	Grab
pH	Effluent	**Triannually	Grab

* 2/Month sampling frequency only during the months of April through October. During the remainder of the year, these parameters shall be monitored monthly.

** Triannually sampling shall be conducted during March, July and November.

If Groundwater sampling indicates or predicts problems with the compliance with Groundwater Standards, this permit will be modified to include additional and/or more restrictive limitations.

4. The Permittee shall maintain adequate records 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.
5. Freeboard in the 5-day upset pond and wet weather storage pond shall be recorded weekly.
6. Three (3) copies of all monitoring data [as specified in Conditions III(2) and III(3)] on Form NDMR-1 and three (3) copies of all operation and disposal records [as specified in Conditions III(4) and III(5)] on Form NDAR-1 shall be submitted monthly on or before the last day of the following month. All information shall be submitted to the following address:

NC Division of Water Quality
Information Processing Unit
1617 Mail Service Center
Raleigh, North Carolina 27699-1617
7. A record shall be maintained of all residuals removed from this facility. This record shall include the name of the hauler, permit authorizing the disposal or a letter from a municipality agreeing to accept the residuals, date the residuals were hauled, and volume of residuals removed.

8. A maintenance log shall be maintained at this facility including but not limited to the following items:
- Daily sampling results of dissolved oxygen in the aeration basin and at the clarifier weir.
 - Visual observations of the plant and plant site.
 - Record of preventative maintenance (changing of filters, adjusting belt tensions, alarm testing, diffuser inspections and cleanings, etc.).
 - Date of calibration of flow measurement device.
 - Date and results of power interruption testing on alternate power supply.

9. **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:

- 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.
- 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.
- Any failure of a pumping station, sewer line, or treatment facility resulting in a by-pass directly to receiving waters without treatment of all or any portion of the influent to such station or facility.
- Any time that self-monitoring information indicates that the facility has gone out of compliance with its permit limitations.

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

- Prior to commencement of construction of the irrigation system, a Well Abandonment Record (GW-30 form) shall be completed for each well abandoned and mailed to the address listed in Condition IV.2. A North Carolina Certified Well Contractor, the property owner, or the property lessee according to General Statutes 87-98.4(b) (2) must abandon the well(s). If the abandonment is not performed by a certified well contractor, the property owner or lessee must physically perform the actual well abandonment activities and the well(s) must be abandoned according to the North Carolina Well Construction Standards (15A NCAC 2C .0113) and local county rules.
- All reports and documentation (GW-1, GW-30) shall be mailed to the following address:

Aquifer Protection Section
Information Processing Unit
1617 Mail Service Center
Raleigh, NC 27699-1617

3. Prior to commencement of construction of the irrigation system, the Permittee shall submit two original copies of a scaled site map (scale no greater than 1"=100'); however, special provisions may be granted upon prior approval for large properties. The map(s) must include the flowing information:
 - a. The location and identity of each water supply well.
 - b. The location of major components of the waste disposal system.
 - c. The location of property boundaries within 500 feet of the disposal area(s).
 - d. The latitude and longitude of the established horizontal control monument.
 - e. The elevation of the top of the well casing (which shall be known as the "measuring point") relative to a common datum.
 - f. The depth of water below the measuring point of the well at the time the measuring point is established.
 - g. The location of the Review and Compliance boundaries.
 - h. The date the map is prepared and/or revised.

Control monuments shall be installed in such a manner and made of such materials that the monument will not be destroyed due to activities that may take place on the property. Maps and any supporting documentation shall be sent to the Groundwater Section as addressed above.

The Permittee is responsible for the geographic accuracy of any map submitted, however produced.

4. Domestic waste shall not be applied or discharged onto or below the surface when the vertical separation between the waste and the seasonal high water table is less than one foot.
5. The Compliance Boundary and Review Boundary for the waste disposal area(s) is specified by regulations in 15A NCAC 2H, Waste Not Discharged to Surface Waters, specifically, .0219(k)(1)(C)(i)(III). The Compliance Boundary and Review Boundary for groundwater shall be established at the property boundary. An exceedance of Groundwater Quality Standards at or beyond the Compliance Boundary is subject to remediation action according to 15A NCAC 2L .0106(d)(2).
6. Prior to commencement of construction of the irrigation system, completed GW-1 Forms (Well Construction Record) shall be completed for each water supply well existing on the property and mailed to the address listed above. Well construction information for Wells 1, 4, 5, 8, 9 and 14 has already been received, and the construction information on these wells is exempt from this requirement.

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.

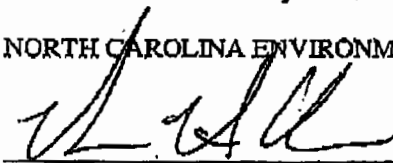
3. Any duly authorized officer, employee, or representative of the Division may, upon presentation of credentials, enter and inspect any property, premises or place on or related to the disposal site or facility at any reasonable time for the purpose of determining compliance with this permit; may inspect 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 29th day of November, 2004

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



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

Permit Number WQ0022870

Permit No. WQ0022870
November 29, 2004

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,

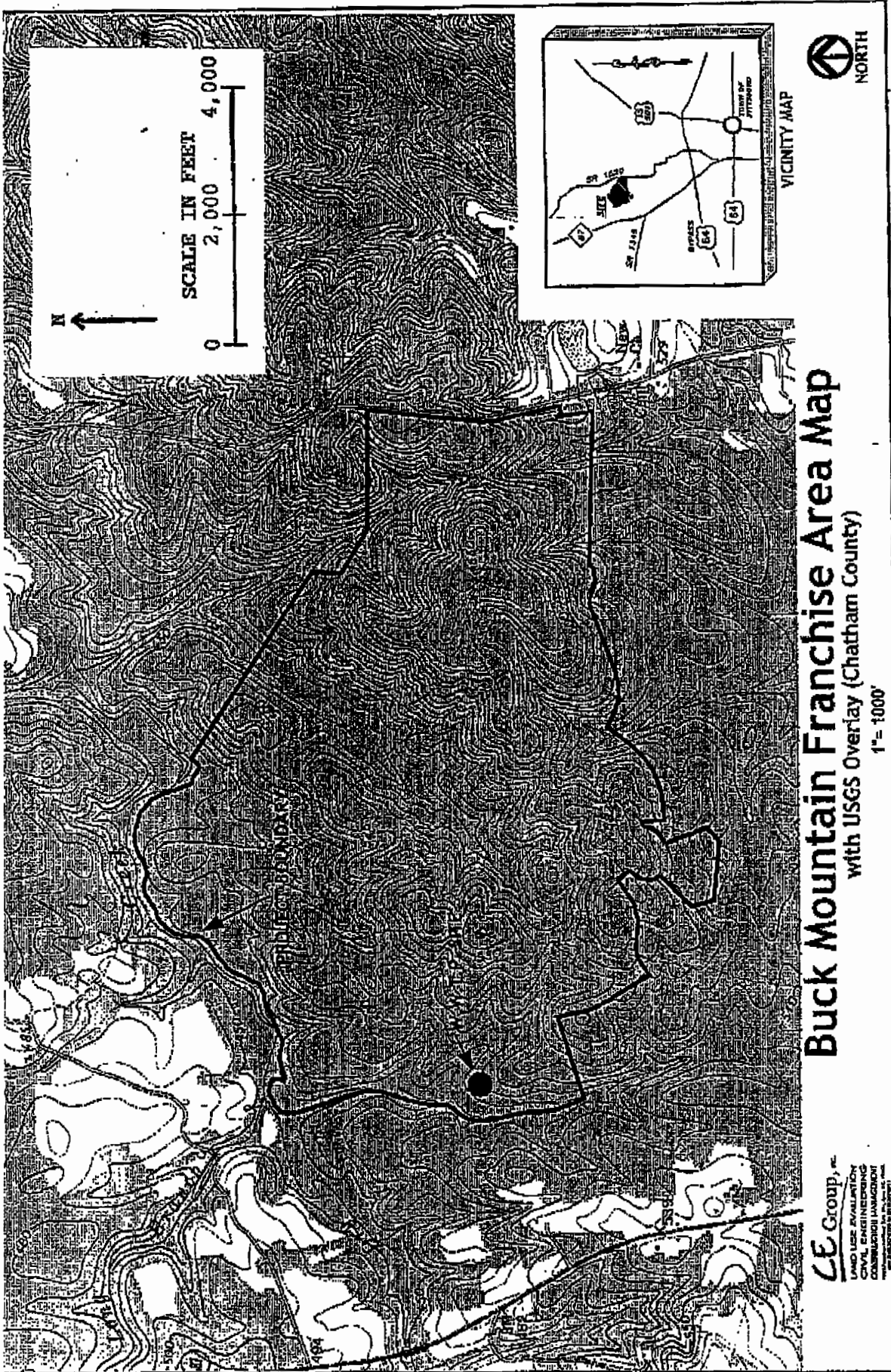
Project Name

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 _____



LE Group, Inc.
 LAND USE EVALUATION
 CIVIL ENGINEERING
 CONSTRUCTION MANAGEMENT
 1500 W. HARRIS BLVD., SUITE 200
 WARRINGTON, VA 22091

Buck Mountain Franchise Area Map
 with USGS Overlay (Chatham County)

1" = 1000'

FIGURE 1
HEATER UTILITIES, INC. - BUCK MTN DEVELOPMENT
REUSE SPRAY SYSTEM
CHATHAM COUNTY
WQ0022870/GW03116
SITE LOCATION MAP

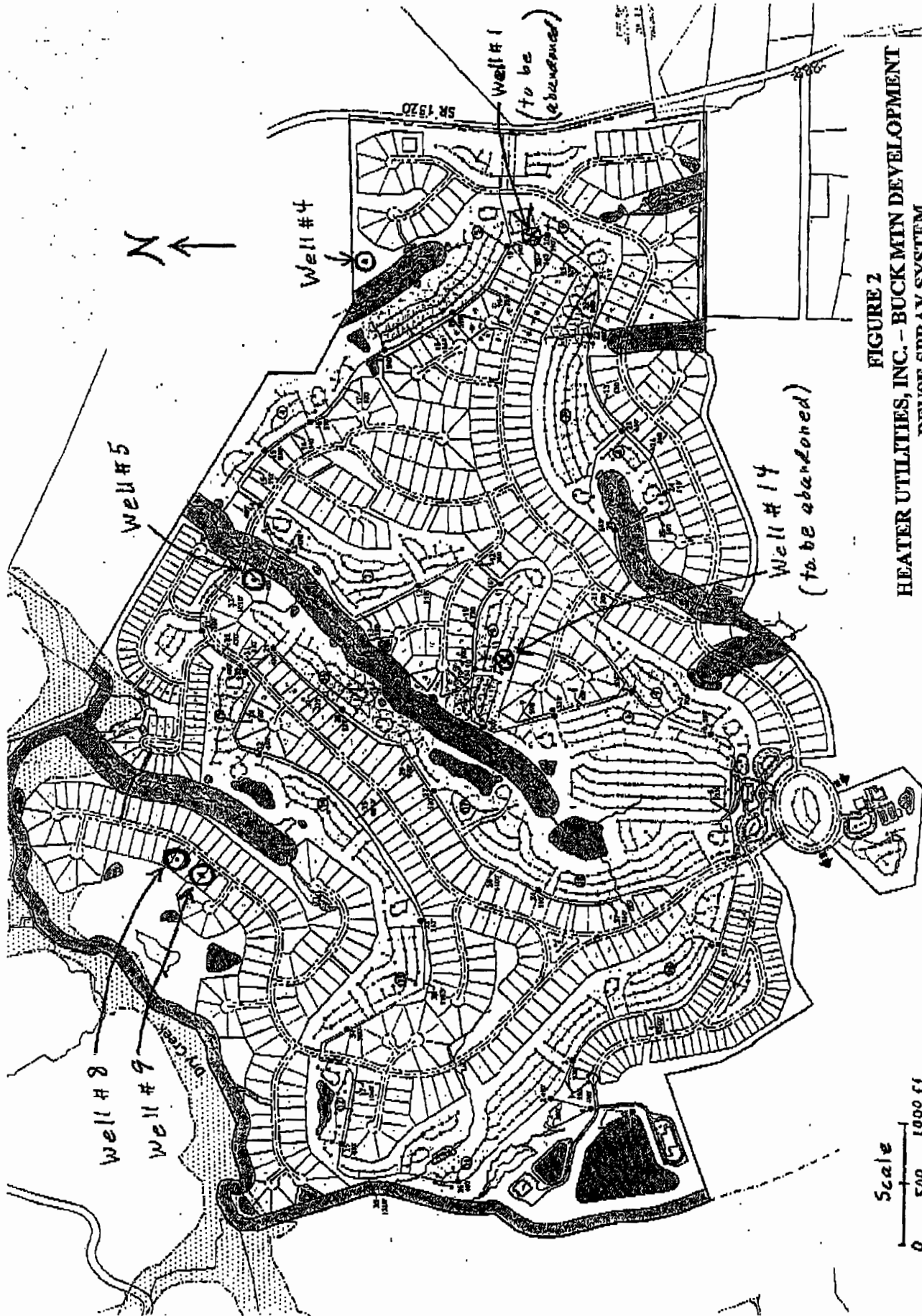


FIGURE 2
HEATER UTILITIES, INC. - BUCKMIN DEVELOPMENT
REUSE SPRAY SYSTEM
CHATHAM COUNTY
WQ0022870/GW03116
SITE DETAIL MAP



Attorneys at Law

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December 20, 2004

FAX

RECIPIENT/ PHONE NO.	FAX NO.	COMPANY/ CITY, STATE, COUNTRY
Mark Ashness (919) 367-8790 Ext. 1	(919) 367-8791	CE Group, Inc. Apex, NC
Mr. Lee Fleming (919) 833-1234	(919) 833-1105	Fleming Engineering Raleigh, NC

Steven J. Levitas

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COMMENTS

TO BE COMPLETED BY KS OPERATIONS CENTER

TRANSMISSION RECEIPT DATE/TIME: _____

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JOB CODE _____

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NCDE&NR/WATER QUAL

PAGE 01

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

Michael F. Easley, Governor
William G. Ross Jr., Secretary
Alan W. Klimek, P.E., Director



Division of Water Quality
Aquifer Protection Section
(Formerly the Non-Discharge Permitting Unit)
Location: 2728 Capital Blvd., Raleigh, NC 27604
Mailing Address: 1636 Mail Service Center, Raleigh, NC 27699-1636
FAX: (919) 715-6048
Date: 12/15/04

FAX TO: <u>JERRY TWEED</u>	FAX NUMBER: <u>460-1788</u>
<u>STEVE LEVITAS</u>	<u>510-6145</u>

FROM: <u>N. THORNISBURG</u>
PHONE: <u>715-6160</u>

NO. OF PAGES INCLUDING THIS SHEET: <u>20</u>
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If you receive this fax by mistake, call: Aquifer Protection Section @ (919) 733-3221



*Bud Mountain
 Chatham County
 WQ0022870*

BYNUM, N. C.
 N.3545—W79C7.5/7.5
 1968
 AMS 51NS I SW—SERIES V842


 NORTH
 1" = 2000'

*D225H
 Bynum*

12/15/2004 14:46

919-715-0588

NCDE&NR/WATER QUAL

PAGE 17

**WATER POLLUTION CONTROL SYSTEM OPERATORS
CERTIFICATION COMMISSION**

**CLASSIFICATION
RATING SHEET FOR WATER POLLUTION CONTROL SYSTEMS**

FACILITY INFORMATION:NAME OF FACILITY: Heater Utilities, Inc.-Buck MountainMAILING ADDRESS: 202 MacKenan Ct., Cary, NC 27511COUNTY: ChathamCONTACT PERSON: Jerry TweedTELEPHONE: 919/467-8712PERMIT NO.: WQ0022870

Check One: NC

WQ

HEALTH DP

ORC:

TELEPHONE:

RATING INFORMATION: (Before completing this section, please refer to pages 2-4)PERMITTED FLOW: 270,000 GPD

BNR?

YES

NO

CHECK CLASSIFICATION: WASTEWATER:

1

2

3

4

COLLECTION:

1

2

3

4

SPRAY IRRIGATION

SUBSURFACE

LAND APPLICATION

PHYSICAL/CHEMICAL

GRADE I

GRADE II

RATED BY: Randy JonesREGION: RRQDATE: 12/17/03REGIONAL OFFICE TELEPHONE NUMBER: 919/571-4700EXT: 255

Classification of Biological Water Pollution Control Treatment Systems:**Grade I Biological WPCS**

- Septic tank/sand filter systems
- Biological lagoon systems
- Constructed wetlands and associated appurtenances

√

Grade II Biological WPCS

- Systems that utilize an activated sludge or fixed growth process with a permitted flow less than or equal to 0.5 million gallons per day (mgd)

Grade III Biological WPCS

- Systems that utilize an activated sludge or fixed growth process with a permitted flow of greater than 0.5 through 2.5 million gallons per day (mgd)
- Grade II systems that are required to achieve biological nutrient reduction *

Grade IV Biological WPCS

- Systems that utilize an activated sludge or fixed growth process with a permitted flow of greater than 2.5 million gallons per day (mgd)
- Grade III systems that are required to achieve biological nutrient reduction *

*** Biological Nutrient Reduction -**

The reduction of total nitrogen or total phosphorus by an activated sludge or fixed growth process as required by the facilities permit.

.....

Classification of Collection Water Pollution Control Systems:
(whichever provides lowest grade)

Same grade as biological water pollution control system. Grade of system:

Based on population served:

1,500 or Less = Grade I

1,501 to 15,000 = Grade II

15,001 to 50,000 = Grade III

50,001 or more = Grade IV

Classification of Spray Irrigation Water Pollution Control Systems:

- Systems which utilize spray irrigation for the reuse or disposal of wastewater. These systems include: septic tanks, sand filter, oil/water separators, lagoons, storage basins, screening, sedimentation. Systems other than those listed above shall be subject to additional classification.

Classification of Land Application of Residuals Systems:

- Systems permitted and dedicated for the land application of residuals that are produced by a water pollution control system or contaminated soils.

Classification of Physical/Chemical Water Pollution Control Treatment Systems:

- Grade I Physical/Chemical: Any water pollution control system that utilizes a primarily physical process to treat wastewater. This classification includes groundwater remediation systems **
- Grade II Physical/Chemical: Any water pollution control system that utilizes a primarily chemical process to treat wastewater. This classification includes reverse osmosis, electrodialysis, and ultrafiltration systems. **

*** Any water pollution control system that utilizes a physical/chemical process to enhance an activated sludge or fixed growth process, shall not be subject to additional classification*

Classification of Subsurface Water Pollution Control Systems:

- Systems which utilize the soil for subsurface treatment and disposal of wastewater and/or are required to have a certified operator under 15A NCAC 18A.1961. ***

**** Any subsurface system that has as part of its treatment process a water pollution control system that may be classified under Rules .0302 through .0307 of this section shall be subject to additional classification.*